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SIR JOHN LUBBOCK, Bart., M.P., F.R.S., *President, in the Chair.*

Mr. HODDER M. WESTROPP exhibited a worked-flint of tri-radiate form, said to have been found many years ago on Ashey Down, in the Isle of Wight.

The PRESIDENT, having made some remarks respecting the formation of the Institute, vacated the chair in favour of Professor Huxley, V.P., and read the following paper:—

I.—*On the DEVELOPMENT of RELATIONSHIPS.* By Sir JOHN LUBBOCK, Bart., M.P., F.R.S., Pres. Anth. Inst.

MR. MORGAN, whose remarkable memoir, entitled "A Conjectural Solution of the Origin of the Classificatory System of Relationship",* is doubtless well known to many gentlemen present, has now published, by the assistance of the Smithsonian Institution, his promised work on the same subject.† Those who have read his preliminary memoir will naturally have waited for the full development of his views, as well as of the facts on which they are based, with much interest; and they will not be disappointed, for Mr. Morgan's work is certainly one of the most valuable contributions to ethnological science which has appeared for many years.

It contains schedules, most of which are very complete, giving the systems of relationships of no less than 139 races or tribes; and we have, therefore (though there are still many lamentable deficiencies—the Siberians, South Americans, and true Negroes, being, for instance, as yet unrepresented), a great body of evidence

* "Proc. Am. Ac. of Arts and Sciences", vol. vii, Feb. 1868.

† "Systems of Consanguinity and Affinity of the Human Family". By L. H. Morgan. 1870.

illustrating the ideas on the subject of relationships which prevail among different races of men.

Our own system of relationships naturally follows from the marriage of single pairs; and it is, in its general nomenclature, so mere a description of the actual facts, that most persons tacitly regard it as necessarily general to the human race, with, of course, verbal and unimportant differences in detail. Hence but little information can be extracted from dictionaries and vocabularies. They generally, for instance, give words for uncle, aunt, and cousin; but an uncle may be either a father's brother or a mother's brother, and an aunt may be either a father's sister or a mother's sister; a first cousin, again, may be the child of any one of these four uncles and aunts; but practically, as we shall see, these cases are in many races distinguished from one another; and I may add, in passing, it is by no means clear that we are right in regarding them as identical and equivalent. Travellers have, on various occasions, noticed with surprise some special peculiarity of nomenclature which came under their notice; but Mr. Morgan was the first to perceive the importance of the subject, and to collect complete schedules of relationships. The special points which have been observed have, indeed, been generally regarded as mere eccentricities, but this is evidently not the case, because the principle or principles to which they are due are consistently carried out, and the nomenclature is reciprocal generally, though not quite without exceptions. Thus, if the Mohawks call a father's brother, not an uncle, but a father, they not only call his son a brother and his grandson a son, but these descendants also use the correlative terms.

We must remember that our ideas of relationships are founded on our social system, and that, as other races have very different habits and ideas on this subject, it is natural to expect that their systems of relationship would also differ from ours. I have elsewhere* pointed out, that the ideas and customs with reference to marriage are very dissimilar in different races, and we may say, as a general rule, that, as we descend in the scale of civilisation, the family diminishes, and the tribe increases, in importance. Words have a profound influence over thought, and true family-names prevail principally among the highest races of men. Even in the less advanced portions of our own country, we know that collective names were those of the tribe, rather than the family.

Even among the Romans the "family" was not a natural family in our sense of the term. It was founded,† not on mar-

* "On the Origin of Civilisation, and Primitive Condition of Man" Longmans, 1870.

† See Ortolan's Justinian, p. 126 *et seq.*

riage, but on power. The family of a chief consisted, not of those allied to him by blood, but of those over whom he exercised control. Hence, an emancipated son ceased to be one of the family, and did not, except by will, take any share in his father's property; on the other hand, the wife introduced into the family by marriage, or the stranger converted into a son by adoption, became regularly recognised members of the family, though no blood tie existed.

Marriage, again, in Rome, was symbolised by capture or purchase, as among so many of the lower races at the present day. In fact, the idea of marriage among the lower races of men generally is essentially of a different character from ours; it is material, not spiritual; it is founded on force, not on love; the wife is, not united, but enslaved, to her husband. Of such a system, traces, and more than traces, still exist in English law: our customs, indeed, are more advanced, and wives enjoy a very different status in reality to that which they occupy in law. Among the Redskins, however, the wife is a mere servant to her husband, and there are cases on record, in which husband and wife, belonging originally to different tribes, have lived together for years without either caring to acquire the other's language, satisfied to communicate with one another entirely by signs.

It must, however, be observed that, though the Redskin family is constituted in a manner very unlike ours, still the nomenclature of relationships is founded upon it, such as it is, and has no relation to the tribal system, as will presently be shown.

Mr. Morgan divides the systems of relationship into two great classes, the descriptive and the classificatory. The first, he says (p. 12), "which is that of the Aryan, Semitic, and Uralian families, rejecting the classification of kindred, except so far as it is in accordance with the numerical system, describes collateral consanguinei, for the most part, by an augmentation or combination of the primary terms of relationship. These terms, which are those for husband and wife, father and mother, brother and sister, and son and daughter, to which must be added, in such languages as possess them, grandfather and grandmother, and grandson and granddaughter, are thus restricted to the primary sense in which they are here employed. All other terms are secondary. Each relationship is thus made independent and distinct from every other. But the second, which is that of the Turanian, American Indian, and Malayan families, rejecting descriptive phrases in every instance, and reducing consanguinei to great classes by a series of apparently arbitrary generalisations, applies the same terms to all the members of the same class. It thus confounds relationships, which, under the descriptive system, are distinct, and enlarges

the signification both of the primary and secondary terms beyond their seemingly appropriate sense."

While, however, I fully admit the radical difference between, say, our English system and that of the Kingsmill Islanders, as shown in Table 1* (opposite p. 27), they seem to me to be rather the extremes of a series, than to be founded on different ideals.

Mr. Morgan admits that systems of relationships have undergone a gradual development, following that of the social condition; but he also attributes to them great value in the determination of ethnological affinities. I am not sure that I exactly understand his views as to the precise bearing of these two conclusions in relation to one another; and I have elsewhere given my reasons for dissenting from his interpretation of the facts in reference to social relations. I shall, therefore, now confine myself to the question of the bearing of systems of relationships on questions of ethnological affinity, and to a consideration of the manner in which the various systems have arisen. As might naturally have been expected, Mr. Morgan's information is most full and complete with reference to the North American Indians. Of these, he gives the terms for no less than 268 relationships in about seventy different tribes. Of these relationships, some are for our present purposes much more important than others. The most significant are the following:

1. Brother's son and daughter.
2. Sister's son and daughter.
3. Mother's brother.
4. Mother's brother's son.
5. Father's sister.
6. Father's sister's son.
7. Father's brother.
8. Father's brother's son.
9. Mother's sister.
10. Mother's sister's son.
11. Grandfather's brother.
12. Brothers' and sisters' grandchildren.

Now let me call your attention to the Wyandot system as shown in Column 8 of Table 1. It will be observed that a mother's brother is called an uncle; his son a cousin; his grandson a son when a male is speaking, a nephew when a female is speaking; his great-grandson a grandson. A father's sister is termed an aunt; her son a cousin; her grandson a son; her great-grandson a grandson. A father's brother is a father; his son a brother, distinguished, however, by different terms, ac-

* I have constructed this table from Mr. Morgan's schedules, selecting the relationships which are the most significant, and arranging them in a manner which seems to me more instructive than that adopted by Mr. Morgan.

cording as he is older or younger than the speaker ; his grandson a son ; his great-grandson a grandson. A mother's sister is a mother ; her son is a brother, distinguished as before ; her grandson a son when a male is speaking, a nephew when a female is speaking. A grandfather's brother is a grandfather ; and a grandfather's sister is a grandmother. A brother's son is a son when a male is speaking, but a nephew when a female is speaking ; while a sister's son is a nephew when a male is speaking, but a son when a female is speaking. Lastly, brothers' grandchildren, and sisters' grandchildren, are called grandchildren.

This system, at first, strikes one as illogical and inconsistent. How can a person have more than one mother ? How can a brother's son be a son, or an uncle's great-grandson a grandson ? Again, while classing together several relationships which we justly separate, it distinguishes between elder and younger brothers and sisters ; and, in several cases, the relationship depends on the sex of the speaker. Since, however, a similar system prevails over a very wide area, it cannot be dismissed as a mere arbitrary or accidental arrangement. The system is, moreover, far from being merely theoretical, but is in every-day use. Every member of the tribe knows his exact relationship to every other, and this knowledge is kept up by the habit, general among the American tribes, and occurring also elsewhere, as, for instance, among the Esquimaux, the Tamils, Telugus, Chinese, Japanese, Feejeeans, &c., of addressing a person, not by his name, but by his relationship. Among the Telugus and Tamils an elder may address a younger by name, but a younger must always use the term for relationship in speaking to an elder. This custom is, probably, connected with the curious superstitions about names ; but, however it may have arisen, the result is that an Indian addresses his neighbour as "my father," "my son," or "my brother," as the case may be : if not related, he says, "my friend."

Thus the system is kept up by daily use ; nor is it a mere mode of expression. Although, in many respects, opposed to the existing customs and ideas, it is, in some, entirely consonant with them : thus, among many of the Redskin tribes, if a man marries the eldest girl in a family, he can claim in marriage all the others as they successively come to maturity ; this custom exists among the Shyennes, Omahas, Iowas, Kaws, Osages, Blackfeet, Crees, Minnitarees, Crows, and other tribes. I have already mentioned that among the Redskins, generally, the mother's brother exercises a more than paternal authority over his sister's children. I shall have occasion to refer again to this remarkable exaggeration of avuncular authority.

Mr. Morgan was much surprised to find that a system, more or less like that of the Wyandots, was very general among the Red-

skins of North America; but he was still more astonished to find that the Tamil races of India have one almost identical. A comparison of Columns 8 and 9 in Table I, will show that this is the case, and the similarity is even more striking in Mr. Morgan's tables, where a larger number of relationships is given.

How then did this system arise? How is it to be accounted for? It is by no means consonant, in all respects, to the present social conditions of the races in question; nor does it agree with tribal affinities. The American Indians generally follow the custom of exogamy, as it has been called by Mr. MacLennan, that is to say, no one is permitted to marry within the clan; and, as descent goes in the female line, a man's brother's son, though called his son, belongs to a different clan; while his sister's son does belong to the clan, though he is regarded as a nephew, and consequently as less closely connected. Hence, a man's nephew belongs to his clan, but his son belongs to a different clan.

Mr. Morgan, from several passages, appears to regard the system as arbitrary, artificial, and intentional.* He discusses, at some length, the conclusions to be drawn from its wide extension over the American continent, and its presence also in India. "The several hypotheses," he says, "of accidental concurrent invention, of borrowing from each other, and of spontaneous growth, are entirely inadequate."† With reference to the hypothesis of independent development in disconnected areas, he observes that it possesses "both plausibility and force." It has, therefore, he adds, (p. 501), "been made a subject of not less careful study and reflection than the system itself. Not until after a patient analysis and comparison of its several forms upon the extended scale in which they are given in the tables, and not until after a careful consideration of the functions of the system, as a domestic institution, and of the evidence of its mode of propagation from age to age, did these doubts finally give way, and the insufficiency of this hypothesis to account for the origin of the system many times over, or even a second time, became fully apparent."

And again, "if the two families (*i.e.*, the Redskin and the Tamil) commenced on separate continents in a state of promiscuous intercourse, having such a system of consanguinity as this state would beget, of the character of which no conception can be formed, it would be little less than a miracle if both should develop the same system of relationship."‡ He concludes, then, that it must be due to "transmission with the blood from a common original source.

* See pp. 157, 392, 394, 421, 456, etc.

† Loc. cit., p. 495.

‡ Loc. cit., p. 505.

If the four hypotheses named cover and exhaust the subject, and the first three are incapable of explaining the present existence of the system in the two families, then the fourth and last, if capable of accounting for its transmission, becomes transformed into an established conclusion.*

That there is any near alliance between the Redskin and Tamil races would be an ethnological conclusion of great importance. It does not, however, seem to me to be borne out by the evidence. The Feejeean system, with which the Tongan is almost identical, is very instructive in this respect, and scarcely seems to have received from Mr. Morgan the consideration which it merits. Now, Columns 9, 10, and 11, of Table I, show that the Feejeean and Tongan systems are identical with the Tamil. If, then, this similarity is, in the case of the Tamil, proof of close ethnological affinity between that race and the Redskin, it must equally be so in reference to the Feejeeans and the Tongans. It is, however, well known that these races belong to very distinct divisions of mankind, and any facts which prove similarity between these races, however interesting and important they may be as proofs of identity in human character, and history, can obviously have no bearing on special ethnological affinities. Moreover, it seems clear, as I shall attempt presently to show, that the Tongans have not used their present system ever since their ancestors first landed on the Pacific islands, but that it has subsequently developed itself from a far ruder system, which is still in existence in many of the surrounding islands.

I may also observe that the Two-Mountain Iroquois, whose close ethnological affinity with the Wyandots no one will question, actually agree, as shown by Columns 3 and 4 of Table I, more nearly with this ruder Pacific, or, as Morgan calls it, "Malayan" system, than they do with that of the neighbouring American tribes.

For these and other reasons I think it is impossible to adopt Mr. Morgan's views either on the causes which have led to the existence of the Tamil system, or as to the ethnological conclusions which follow from it.

How, then, have these systems arisen, and how can we account for such remarkable similarities between races so distinct, and so distant, as the Wyandots, Tamils, Feejeeans, and Tongans? In illustration of my views on this subject, I have constructed the following Table (Table I), to which I will shortly direct your attention. Before doing so, however, I must make a few preliminary remarks. In all cases I have given the translation of the native words, and, following Morgan, when one word is used

* Loc. cit., p. 505. See also p. 497.

for several relationships, have translated it by the simplest. Thus in Feejeean, the word "*Tamanngu*,"—literally "Tama my," the suffix "*nnngu*" meaning "my"—is applied not only to a father, but to a father's brother; hence, as the father is the more important, we say that they call a father's brother a father.

In most cases the origins of the terms for relationships are undeterminable; I have discussed some in my work on the "*Origin of Civilisation*;" other terms, as given by Mr. Morgan, have so far withstood the wear and tear of daily use as to be still traceable.

Thus, in Polish, the word for my great-uncle is, literally, "my cold grandfather:" the word for "wife" among the Crees is "part of myself;" that for husband among the Choctas is "he who leads me;" a daughter-in-law among the Delawares is called *Nah-hum*, literally, "my cook;" for which ungracious expression, however, they make amends by their word for husband or wife, *Wee-chaa-oke*, which is, literally, "my aid through life."

It might, *à priori*, be supposed that the nomenclature of relationships would be greatly affected by the question of male or female descent. This, however, does not appear to be the case. Under a system of female descent, combined with exogamy, as a man must marry out of his tribe, and as his children belong to their mother's tribe, it follows that a man's children do not belong to his tribe. On the other hand, a woman's children, whomsoever she may marry, belong to her tribe. Hence, while neither a man's nor his brother's children belong to the same tribe as himself, his sister's children must do so, and are, in consequence, often regarded as his heirs. In fact, for all practical purposes, among many of the Redskin and other tribes, a man's sister's sons are regarded as his children.

Elsewhere* I have shown that this remarkable custom prevails, not only among the Redskins, but also in various other parts of the world. Here, however, I will confine myself to the Redskins, amongst whom it may almost be laid down as a general proposition, that the mother's brother exercises a more than paternal authority over his sister's children. He has a recognised right to any property they may acquire, if he chooses to exercise it; he can give orders which a true father would not venture to issue; he arranges the marriages of his nieces, and is entitled to share in the price paid for them. The same custom prevails even among the semi-civilised races; for instance, among the Choctas the uncle, not the father, sends a boy to school.

* "*Origin of Civilisation, and Primitive Condition of Man.*" Longmans, 1870. Pp. 106, 120.

Yet among these very tribes, a man's sister's son is called his nephew, while his brother's son is called his son.

Thus, although a man's mother's brother is called an uncle, he has, in reality, more power and responsibility than the true father. The true father is classed with the father's brother, and the mother's sister; but the mother's brother stands by himself, and, although he is called an uncle, he exercises the real parental power, and on him rests the parental responsibility. In fact, while the names of relationships follow the marriage customs, the ideas are guided by the tribal organisation. Hence we see that not only do the ideas of the several relationships, among the lower races of men, differ from ours; but the idea of relationship, as a whole, is, so to say, embryonic, and subsidiary to that of the tribe.

In fact, the idea of relationship, like that of marriage, was founded, not on duty, but on power. Only with the gradual elevation of the species has the latter been subordinated to the former.

I will now beg your attention to Table I (opposite p. 27), and begin with the Hawaiian, or Sandwich Isle system.

The Hawaiian language is rich in terms for relationships. A grandparent is *Kupuna*, a parent is *Makua*, a child *Kaikee*, a son-in-law, or daughter-in-law, is *Hunona*, a grand-child *Moopuna*, brothers in the plural are *Hoahanau*; a brother-in-law, or sister-in-law, is addressed as *Kaikoeke*: there are special words for brother and sister according to age and sex; thus, a boy speaking of an elder brother, and a girl speaking of an elder sister, use the term *Kai-kuaana*; a boy speaking of a younger brother, or a girl of a younger sister, uses the word *Kaikaina*; a boy speaking of a sister calls her *Kaikuwahine*, while a sister calls a brother, whether older or younger, *Kai-kunana*. They also recognise some relationships for which we have no special terms; thus, an adopted son is *Hunai*; the parents of a son-in-law, or daughter-in-law, are *Puliena*; a man addresses his brother-in-law, and a woman her sister-in-law, as *Punaloa*; lastly, the word *Kolai* has no corresponding term in English.

It will be observed that these relationships are conceived in a manner entirely unlike ours; we make no difference between an elder brother or a younger brother, nor does the term used depend on the sex of the speaker. The contrast between the two systems is, however, much more striking when we come to consider the deficiencies of the Hawaiian system, as indicated in the nomenclature. Thus, there is no word for cousin, none for uncle or aunt, nephew or niece, son or daughter; nay, while there is a word indicating parent, there is said to be none for father or even for mother.

The principal features of this remarkable system, so elaborate, yet so rude, are indicated in the second Column of Table I. I have already mentioned that there is no word for father or mother; for the latter they say "parent female," for the former, "parent male;" but the term "parent male" is not confined to the true parent, but is applied equally to the father's brother, and mother's brother; while the term "parent female" denotes also father's sister and mother's sister. Thus, uncleships and auntships are ignored, and a child may have several fathers and several mothers. In the succeeding generation, as a man calls his brother's and sister's children his children, so do they regard him as their father: again, as a mother's brother and a father's brother are termed parents male, a mother's sister and father's sister, parents female; their sons are regarded as brothers, and their daughters as sisters. Again, a man calls the children of these constructive brothers and sisters, equally with those of true brothers and sisters, his children; and their children, again, his grandchildren.

The term "parent male", then, denotes not only a man's father,
but also his father's brother
and mother's brother,
while the term "parent female" in the same way denotes
not only a man's mother,
but also his mother's sister and
father's sister.

There are, in fact, six classes of parents; three on the male side, and three on the female.

The term, my elder brother, stands also for my
 Mother's brother's son,
 Mother's sister's son,
 Father's brother's son,
 Father's sister's son,
 while their children, again, are all my grandchildren. Here
 there is a succession of generations, but no family. We find
 here no true fathers and mothers, uncles or aunts, nephews or
 nieces, but only

Grandparents,
Parents,
Brothers and sisters,
Children, and
Grandchildren.

This nomenclature is actually in use, and, so far from having become obsolete, being in Feejee combined with inheritance through females, and the custom of immediate inheritance, gives a nephew the right to take his mother's brother's property: a right which is frequently exercised, and never questioned, although

apparently moderated by custom. It will very likely be said that though the word "son", for instance, is used to include many who are really not sons, it by no means follows that a man should regard himself as equally related to all his so-called "sons." And this is true, but not in the manner which might have been *à priori* expected. For, as many among the lower races of men have the system of inheritance through females, it follows that they consider their sister's children to be in reality more nearly related to them, not only than their brother's children, but even than their very own children. Hence we see that these terms, son, father, mother, etc., which to us imply relationship, have not strictly, in all cases, this significance, but rather imply the relative position in the tribe.

Additional evidence of this is afforded by the restrictions on marriage which follow the tribe, and not the terms. Thus the customs of a tribe may, and constantly do, forbid marriage with one set of constructive sisters or brothers, but not with another.

The system shewn in column 2 is not apparently confined to the Sandwich Islands, but occurs also in other islands of the Pacific. Thus, the Kingsmill system, as shown in column 3, is essentially similar, though they have made one step in advance, having devised words for father and mother. Still, however, the same term is applied to father's brother, and a mother's brother as to a father; and to a father's sister and a mother's sister as to a mother: consequently, first cousins are still called brothers and sisters, and their children and grandchildren are children and grandchildren.

The habits of the Southsea Islanders, the entire absence of privacy in their houses, their objection to sociable meals, and other points in their mode of life, have probably favoured the survival of this very rude system, which is by no means in accordance with their present social and family relations, but indicates a time when these were less developed than at present. We know as yet no other part of the world where the nomenclature of relationships is so savage.

Yet a near approach is made by the system of the Two-Mountain Iroquois, which is, perhaps, the lowest yet observed in America. In this tribe a brother's children are still regarded as sons, and a woman calls her sister's children her sons; a man, however, does not regard his sister's children as his children, but distinguishes them by a special term; they become his nephews. This distinction between relationships, which we regard as identical, has its basis in, and is in accordance with American marriage customs. Unfortunately, I have no means of ascertaining whether these rules occur among the tribe in question, but they are so general among the Indians of North America that in all probability it is the case. One of these customs is that if a

man marries a girl who has younger sisters, he thereby acquires a right to those younger sisters as they successively arrive at maturity.* This right is widely recognised, and frequently acted upon. The first wife makes no objection, for the work which fell heavily on her, is divided with another, and it is easy to see that, when polygamy prevails, it would be uncomplimentary to refuse a wife who legally belonged to you. Hence a woman regards her sister's sons as her sons; they may be, in fact, the sons of her husband: any other hypothesis is uncomplimentary to the sister. Throughout the North American races, therefore, we shall find that a woman calls her sister's children her children; in no case does she term them nephews or nieces, though in some few tribes she distinguishes them from her own children by calling them stepchildren.

Another very general rule in America, as elsewhere, is that no one may marry within his own clan or family. It has been shown in MacLennan's *Primitive Marriage*, and in the *Origin of Civilisation*, that this rule is general in North America, and widely prevalent elsewhere. The result is, that as a woman and her brother belong to one family, her husband must be chosen from another. Hence while a man's father's brother and sister belong to his clan, and his mother's sister, being one of his father's wives, is a member of the family—one of the fire-circle, if I may so say—the mother's brother is necessarily neither a member of the fire-circle, nor even of the clan. Hence while a father's sister and mother's sister are called mother, and a father's brother father, throughout the Redskin tribes the marriage rules exclude the mother's brother, who is accordingly distinguished by a special term, and in fact is recognised as uncle. Thus we can understand how it is that of the six classes of parents mentioned above, the mother's brother is the first to be distinguished from the rest by a special name. It will however be seen by the table that among the Two-Mountain Iroquois his son is called brother, his grandson son, and so on. This shows that he also was once called "father" as in Polynesia, for in no other manner can such a system of nomenclature be accounted for. All the other relationships, as given in the table, are, it will be seen, identical with those recognised in the Hawaiian and Kingsmill system. Thus only in two respects, and two, moreover, which can be satisfactorily explained by their marriage regulations, do the Two-Mountain Iroquois differ from the Pacific system. It is true that these two points of difference involve some others not shown in the table. Thus while a woman's father's sister's daughter's son is her son, a man's father's sister's daughter's son is his nephew,

* See "Arch. Amer.", vol. ii, p. 109.

because his father's sister's daughter is his sister, and his sister's son, as already explained, is his nephew. It should also be added that the Two-Mountain Iroquois show an advance as compared with the Hawaiian system in the terms relating to relationships by marriage.

The Micmac system, as shown in column 5, is in three points an advance on that of the Two-Mountain Iroquois. Not only does a man call his sister's son his nephew, but a woman applies the same term to her brother's son. Thus, men term their brother's sons "sons", and their sister's sons "nephews"; while women, on the contrary, call their brother's sons "nephews", and their sister's sons "sons"; obviously because there was a time when, though brothers and sisters could not marry, brothers might have their wives in common, while sisters, as we know, habitually married the same man. It is remarkable also that a father's brother and a mother's sister are also distinguished from the true father and mother. In this respect the Micmac system is superior to that prevailing in most other Red-skin races. For the same reason, not only is a mother's brother termed an uncle, but the father's sister is no longer called a mother, but is distinguished by a special term, and thus becomes an aunt. The social habits of the Redskins, which have already been briefly alluded to, sufficiently explain why the father's sister is thus distinguished, while the father's brother and mother's sister are still called respectively father and mother. Moreover, as we found among the Two-Mountain Iroquois that although the mother's brother is recognised as an uncle, his son is still called brother, thus pointing back to a time when the father's brother was still called father; so here we see that though the father's sister is called aunt, her son is still regarded as a brother; indicating the existence of a time when, among the Micmacs, as among the Two-Mountain Iroquois, a father's sister was termed a mother. It follows as a consequence that, as a father's brother's son, a mother's brother's son, a father's sister's son, and a mother's sister's son, are considered to be brothers, their children are termed sons by the males; but as a woman calls her brother's son a nephew, so she applies the same term to these constructive brother's sons.

If the system of relationship is subject to gradual growth, and approaches step by step towards perfection, we should naturally expect that, from differences of habits and customs, the various steps would not among all races follow one another in precisely the same order. Of this the Micmacs and Wyandots afford us an illustration. While the latter have on the whole made most progress, the former are in advance on one point, for though the Micmacs have distinguished a father's brother

from a father, he is among the Wyandots still termed a father; on the other hand, the Wyandots call a mother's brother's son a cousin, while among the Micmacs he is still termed a brother.

Here we may conveniently consider two Asiatic nations—the Burmese and the Japanese—which, though on the whole considerably more advanced in civilisation than any of the foregoing races, are yet singularly backward in their systems of family nomenclature. I will commence with the Burmese. A mother's brother is called either father (great or little) or uncle: his son is regarded as a brother; his grandson as a nephew; his great-grandson as a grandson. A father's sister is an aunt; but her son is a brother, her grandson is a son, and her great-grandson a grandson. A father's brother is still a father (great or little); his son is a brother; his grandson a nephew; and his great-grandson a grandson. A mother's sister is a mother (great or little); her son is a brother; her grandson a nephew; and her great-grandson a grandson. Grandfathers' brothers and sisters are grandfathers and grandmothers. Brothers' and sisters' sons and daughters are recognised as nephews and nieces, whether the speaker is a male or female; but their children again are still classed as grandchildren.

Among the Japanese a mother's brother is called a "second little father"; a father's sister a "little mother" or "aunt"; a father's brother a "little father" or "uncle"; and a mother's sister a "little mother" or "aunt." The other relationships shown in the table are the same as among the Burmese.

The Wyandots, descendants of the ancient Hurons, are illustrated in the eighth column. Their system is somewhat more advanced than that of the Micmacs. While, among the latter, a mother's brother's son, and a father's sister's son, are called brothers, among the Wyandots they are recognised as cousins. The children of these cousins, however, are still called sons by males, thus reminding us that there was a time when these cousins were still regarded as brothers. A second mark of progress is, that women regard their mother's brother's grandsons as nephews, and not as sons, though the great-grandsons of uncles and aunts are still, in all cases, termed grandsons.

I crave particular attention to this system, which may be regarded as the typical system of the Redskins, although, as we have seen, some tribes have a ruder nomenclature, and we shall presently allude to others which are rather more advanced. A mother's brother is termed uncle; his son is a cousin; his grandson is termed nephew, when a woman is speaking, son in the case of a male. In either case his grandson is termed grandson. A father's sister is an aunt, and her son a cousin; but her grandson and great-grandson are termed, respectively, son and grandson,

thus reminding us that there was a time when a father's sister was regarded as a mother. A father's brother is called father, his son brother, his grandson son, and his great-grandson grandson.

A mother's sister is a mother, her son is a brother, her grandson is called nephew by a female, son by a male; her great-grandson is, in either case, called grandson. A grandfather's brother and sister are called grandfather and grandmother respectively.

A brother's son is called son by a male, and nephew by a female, while a sister's son is called nephew by a male, and son by a female, the reasons for which have been already explained.

Lastly, brothers' son's sons and daughters, sisters' son's sons and daughters, are all called grandsons and granddaughters. Thus we see that in every case the third generation returns to the direct line.

The two following columns represent the Tamil and Feejeean system, with which, also, that of the Friendly Islands very closely agrees. I have already called attention to this, and given my reasons for being unable to adopt the explanation suggested by Mr. Morgan.

It will be observed that the only differences shown in the table between the system of these races and that of the Wyandots, are, firstly, that the mother's brother's grandson is regarded, among the Wyandots, as a nephew by males, and a son by females; while, in the Tamil and Feejeean system, the reverse is the case, and he is termed son by males, and nephew by females. Secondly, that the father's sister's grandson is regarded as a son among the Wyandots, while in the Tamil and Feejeean system, he is, when an uncle is speaking, recognised as a nephew. The latter difference merely indicates that the Tamil and Feejeean systems are slightly more advanced than the Wyandot. The other difference is more difficult to understand.

But though the Redskin, Tamil, and Feejeean systems, differing as they do from ours in many ways, which, at first, seem altogether arbitrary and unaccountable, agree so remarkably with one another, we find, also, in some cases, remarkable differences among the Redskin races themselves. These differences affect principally the lines of the mother's brother, and father's sister. This is natural. They are the first to be distinguished from true parents, and new means have, therefore, to be adopted to distinguish the relationships thus recognised. In several cases other old terms were tried, with very comical results. These modes of overcoming the difficulty were so unsatisfactory, that, by the time a father's sister's son was recognised as a cousin, the necessity for the creation of new terms seems to have been generally felt.

Table II shows, as regards fourteen tribes, the result of the attempt to distinguish these relationships. Taking, for instance, the line which gives the terms in use for a mother's brother's grandson, we find the following, viz., son, stepbrother, grandson, and grandchild, stepson, and uncle; in the case of a father's sister's grandson (male speaking), we have grandchild, son, stepson, brother, and father; when a female is speaking, grandchild, son, nephew, brother, and father. Thus, for this single relationship we find six terms in use, and a difference of three generations, viz., from grandfather to son. At first the use of such terms seems altogether arbitrary, but a further examination will show that this is by no means the case.

Column 2 gives the system of the Redknives, one of the most backward tribes on the American continent as regards their nomenclature of relationships. Here, though a mother's brother and a father's sister are, respectively, uncle and aunt, their children are regarded as brothers, their grandchildren as sons, and their great-grandchildren as grandsons. The Munsee system shows a slight advance. Here, though the women call their sister's sons their sons, the males, on the contrary, term them nephews, and, consequently, apply the same term to their mother's brother's daughter's son, and their father's sister's daughter's son, because, as in the preceding case, mothers' brother's daughters, and fathers' sister's daughters, are termed sisters. The Micmacs (column 3) show another step in advance. Here, not only does a man call his sister's son nephew, but, in addition, a woman applies the same term to her brother's sons; consequently, not only a mother's brother's daughter's sons, if a male is speaking, but a mother's brother's son's son, if a female is speaking, and the corresponding relations, on the side of the father's sister, are termed nephews.

Among the Delawares a mother's brother's son, and father's sister's son, are distinguished from true brothers by a term corresponding to "stepbrother." They appear to have also felt the necessity of distinguishing a stepbrother's son from a true son, but having no special term, they retain the same word, thus calling a stepbrother's son a stepbrother. This principle, as we shall see, is followed by several other tribes, and has produced the most striking inconsistencies shown in the table. We find it again among the Crows, where a father's sister is called mother, her daughter again mother; but as her son cannot of course be a mother, he is called "father." The same system is followed by the Pawnees, as shown in columns 7 and 8; and the Grand Pawnees carry it a generation lower, and call their father's sister's grandson on the male side "father": a father's sister's daughter's son is however called a brother. Among the

Cherokees we find this principle most thoroughly carried out, and a father's sister's grandson is also called a father. This case is the more interesting because the circumstance which produced the system is no longer in existence; for, as will be seen, a father's sister is called an aunt. It is not at first obvious that a father's sister being called a mother would account for her son being called a father; but, with the Crow and Pawnee systems before us, we see that the Cherokees could not call their father's sister's sons "fathers", unless there had been a time when a father's sister was regarded as a mother.

The Hare Indians supply us with a case in which mother's brothers and father's sisters being distinguished from fathers and mothers, their children are no longer termed brothers, but are distinguished as cousins; while their grandchildren and great-grandchildren, on the contrary, are still termed sons and grandsons.

So far as the relationships shown in the table are concerned, the system of the Omahas, and of the Sawks and Foxes, is identical. A mother's brother is an uncle, and, for the reason already pointed out, in the case of the Delawares, his sons and son's sons, and even son's grandsons, are also termed grandsons. His daughter's sons, on the contrary, retain the old name of brother. A father's sister is an aunt, her children are nephews, and the descendants of these nephews are grandchildren.

Among the Oneidas a father's brother is an uncle, and his son is a cousin; his son's sons, however, are still sons. His daughter's son is a son when a female is speaking; but, for the reason already explained in the case of the Munsees, males term them nephews. The relationships connected with a father's sister are dealt with in a similar manner, except that a father's sister is still called mother.

The Ottawa system resembles the Micmac, and is formed on the same plan, being, however, somewhat more advanced, inasmuch as the children of uncles and aunts are recognised as cousins, and a man calls his cousin's son, not his son, but his stepson. The Ojibwa system is the same, except that a woman also calls her mother's brother's daughter's son, and father's sister's daughter's son, her stepson, instead of her son. In some of the relationships by marriage, the same causes have led to even more striking differences. Thus, a woman generally calls her father's sister's daughter's husband her brother-in-law; but among the Missouri and Mississippi nations, her son-in-law; among the Minnitarees, the Crows, and some of the Choctaw clans, her father; among the Cherokees, her stepparent; the Republican Pawnees, and some of the Choctas, her grandfather; and among the Tukuthes, her grandson!

Having thus pointed out the curious results to which some of the lower races have been led in their attempts to distinguish relationships, and endeavoured to explain those shown in Table II, I will now return to the main argument.

The Kaffir (Amazulu) system is given in Column 12, Table I. Here, for the first time, we find the father's brother regarded as an uncle, and the mother's sister as an aunt. In other respects, however, the system is not more advanced than the Tamil, Feejeean, or Wyandot. The mother's brother is called uncle,* his son cousin, his grandson son, and his great-grandson, grandchild. A father's sister, quaintly enough, is called father, the Kaffir word for which, *ubaba*, closely resembles ours. His son, however, is called brother; his grandson, accordingly, son; his great-grandson, grandchild. A father's brother, as already mentioned, is uncle; but, as before, his son is called brother; his grandson, son; and his great-grandson, grandson. So, also, a mother's sister is an aunt, but her son is a brother; her grandson a son; and her great-grandson, a grandson. As in all the preceding cases, grandfather's brothers and sisters are considered as, respectively, grandfathers and grandmothers. Brothers' sons and sisters' sons are called sons, and, lastly, their sons again are grandsons.

Excepting in the case of nephews this system, therefore, closely resembles the Tamil, Feejeean, and Wyandot; the other principal differences being, oddly enough, a more correct appreciation of uncles and aunts.

Column 13, Table I, exhibits the nomenclature in use among the Mohegans, whose name signifies "seaside people," from their geographical position on the Hudson and the Connecticut. They belong to the great Algonkin stock. Here, for the first time, a distinction is introduced between a father and a father's brother. The latter, however, is not recognised as an uncle; that is to say, a father's brother and a mother's brother are not regarded as equivalent relationships, but the former is termed stepfather. This distinguishing prefix is the characteristic feature; and, as will be seen, we find the terms, stepmother, stepbrother, and stepchild, (to the exclusion of cousin), as natural consequences of the stepfathership. Still, the mother's sister remains a mother, and her son a brother, and the derivation of this system from one similar to those already considered, is, moreover, indicated by the fact that the members of the third generation are still regarded as grandchildren.

The Crees and Ojibwas, or Chippewas (of Lake Michigan), who also belong to the great Algonkin stock, resemble the Mohegan in

* It is, however, significant that he calls his sister's sons "sons", and not nephews.

the use, though with some minor differences, of the prefix "step", a device which occurs also in a more complicated form among the Chinese. In some points, however, they are rather more advanced, and, in fact, these tribes possess the highest system of relationship yet recorded among the Redskins of North America. A mother's brother is an uncle, and his son is a cousin; as regards his grandson, the tendency to the use of different terms, according as the speaker is a male or female, shows itself in the use by the former of the term stepson, where the latter say nephew, as in some of the ruder tribes. In both cases, mothers' brothers' great grandchildren are called grandchildren. A father's sister is an aunt, and the nomenclature with reference to her descendants is the same as in the case of the mother's brother. A father's brother is a stepbrother; his son is still called a brother by males among the Crees, but is called stepson by the Ojibwas; the other relationships in this line being the same as in the case of the mother's brother and father's sister.

No Redskin regards his mother's sister as an aunt, but the Crees and Ojibwas distinguish her from a true mother by the term stepmother, and her descendants are addressed by the same terms as those of the father's brother. The grandfather's brothers and sisters are called grandfathers and grandmothers. As before, brothers' sons, when a female is speaking, and sisters' sons, when a male is speaking, are called nephews; while brothers' sons, when a male is speaking, and sisters' sons, when a female is speaking, are no longer regarded as true sons, but are distinguished as stepsons. The grandchildren of these nephews and stepsons are, however, all termed grandchildren.

If, now, we compare this system with that of the Two-Mountain Iroquois, we find that out of twenty-eight relationships given in the table, only ten have remained the same. Of these, two are indicative of progress made by the Two-Mountain Iroquois, namely, the term for mother's brother and sister's son; the other eight are marks of imperfection still remaining in the Ojibwa nomenclature: points, moreover, not by any means characteristic of American races, but common, also, as we have seen, to the Hawaiian, Kingsmill, Burmese, Japanese, Tongan, Feejeean, Kaffir, and Tamil systems; as we shall also find, to the Hindi, Karen, and Esquimaux; in fact, to almost all, if not all barbarous peoples, and to some of the most advanced races.

Column 14 (Table I) shows the system of nomenclature as it exists in Hindi, and it may be added that the Bengali, Marathi, and Gujerathi are essentially the same, although the words differ. All these languages are said to be Sanskrit as regards their words; aboriginal, on the contrary, in their grammar. Hindi contains 90% of Sanskrit words, Guzerathi as much as 95%.

With three or four exceptions, it appears that the terms for relationships may be all of Sanskrit origin.

Here, for the first time, we find that a brother's son and a sister's son is termed a nephew, whether the speaker is a male or a female. Yet nephews' children are still termed grandchildren. Again, for the first time, the mother's brother, father's brother, mother's sister, and father's sister are regarded as equivalent, and the terms for their descendants are similar. The two former—*i.e.*, mother's brother and father's brother are termed "uncles;" the two latter—*i.e.*, mother's sister and father's sister are called aunts. Yet, as regards the next generations, the system is less advanced than the Ojibwa, for uncles' sons and aunts' sons are termed brothers, their grandsons nephews, and their great grandsons grandsons. It should, however, be observed that, in the first three languages, *viz.*, the Hindi, Bengali, and Marathi, besides the simple term "brother," the terms "brother through paternal uncle," "brother through paternal aunt," "brother through maternal uncle," and "brother through maternal aunt," are also in use, and are less cumbersome than our English literal translation would indicate. The system, therefore, is transitional on this point. Lastly, a grandfather's brother is called "grandfather;" a grandfather's sister, "grandmother."

The Karens are a rude, but peaceable and teachable race, inhabiting parts of Tenasserim, Burmah, Siam, and extending into the southern parts of China. They have been encroached upon and subjected by more powerful races, and are now divided into different tribes, speaking distinct dialects, of which three are given in Mr. Morgan's tables. Though rude and savage in their mode of life, they are described as extremely moral in their social relations—praise which seems to be fully borne out by their system of relationships, as shown in column 17, Table I.

Column 18 shows the system of another rude people, belonging to a distinct family of the human race, and inhabiting a distant and very different part of the world. Like the Karens, the Esquimaux are a rude people, but like them they are a quiet, peaceable, and moral race. No doubt on some points their ideas differ from ours; their condition does not admit of much refinement,—of any great advance in science or art. They cannot be said to have any religion worthy of the name, yet there is perhaps no more moral people on the face of the earth, none among whom there is less crime; and it is, perhaps, not going too far to say that there is, as far as I can judge, no race of men which has to so full an extent availed itself of its opportunities.

It is most remarkable to find these two races of men, so distinct, so distant, so dissimilar in their modes of life, without a word in common, yet using systems of relationship which, in

their essential features, are identical, although by no means in harmony with the existing social condition: in both, uncles and aunts are correctly recognised, and their children are regarded as cousins; their grandchildren, however, are termed nephews, and the children of these so-called nephews are classed, as in all the previous cases, as grandchildren. Thus, out of the twenty-eight relationships indicated in the table, the Karens and Esquimaux agree with us in twelve, and differ in sixteen. As regards every one, however, of these sixteen they agree with one another, while in eight they follow the same system as every other race which we have been considering.

These facts cannot be the result of chance; there is one way, and as it seems to me, one way only, of accounting for them, and that is by regarding them as the outcome of a progressive development such as that which I have endeavoured to sketch. An examination of the several cases will confirm this view.

The Karen-Esquimaux system is inconsistent with itself in three respects, and precisely where it differs from ours. The children of cousins are termed nephews, which they are not; the children of nephews are regarded as grandchildren, and a grandfather's brothers and sisters are termed, respectively, grandfathers and grandmothers.

The first fact, namely, that a mother's brother's grandsons, and a mother's sister's grandsons, a father's sister's grandsons, and a father's brother's grandsons, are all termed "nephews," clearly points to the existence of a time when a mother's brother and a father's brother were regarded as fathers, a mother's sister and a father's sister as mothers, and their children, consequently, as brothers. The second, namely, that the great-grandchildren of uncles and aunts are regarded as grandchildren, similarly points to a time when nephews and nieces were termed, and regarded as sons and daughters, and their children, consequently, as grandchildren. Lastly, why should grandfather's brothers and grandfather's sisters be called grandfathers and grandmothers, unless there was a time when fathers' brothers and sisters were respectively called "fathers" and "mothers": unless the Karens and Esquimaux once had a system of relationship similar to that which still prevails among so many barbarous tribes, and which, to all appearance, has been gradually modified. Hence, though the Karens and Esquimaux have now a far more correct system of nomenclature than that of many other races, we find even in it clear traces of a time when these peoples had not advanced in this respect beyond the lowest stage.

As already mentioned, the European nations follow, almost without exception, a strictly descriptive system, founded on the marriage of single pairs. The principle is, however, departed

from in a few very rare cases, and in them we find an approach to the Karen-Esquimaux system. Thus in Spanish, a brother's great-grandson is called "grandson." Again, in Bulgarian, a brother's grandson and sister's grandson are called "*Mal vnook mi*," literally, "little grandson my." A father's father's sister is termed a grandmother, and a father's father's brother a grandfather, as is also the case in Russian. The French and Sanskrit, alone, so far as I know, among the Aryan languages, have special words for elder and younger brother. Among Aryan races the Roman and the Germans alone developed a term for cousin,* and we, ourselves, have, even now, no word for a cousin's son. The history of the term "nephew" is also instructive. The word "*nepos*," says Morgan,† "among the Romans, as late as the fourth century, was applied to a nephew as well as a grandson, although both *avus* and *avunculus* had come into use. Eutropius, in speaking of Octavianus, calls him the nephew of Cæsar, "*Cæsaris nepos*," (Lib. vii, c. i). Suetonius speaks of him as *sororis nepos* (Cæsar, c. lxxxiii), and afterwards (Octavianus, c. vii) describes Cæsar as his greater uncle, *major avunculus*, in which he contradicts himself. When *nepos* was finally restricted to grandson, and thus became a strict correlative of *avus*, the Latin language was without a term for nephew, whence the descriptive phrase, *Fratris vel sororis filius*. In English, *nephew* was applied to grandson, as well as nephew, as late as 1611, the period of King James' translation of the Bible. Niece is so used by Shakspeare in his will, in which he describes his granddaughter, Susannah Hall, as 'my niece,'"

So that even among the most advanced races we find some lingering confusion about nephews, nieces, and grandchildren.

Thus, then, we have traced these systems of relationships from the simple and rude nomenclature of the Sandwich Islanders up to the far purer and more correct terminology of the Karens and Esquimaux. I have endeavoured to show that the systems indicated are explicable only on the theory of a gradual improvement and elevation, and are incompatible with degradation: that as the valves indicate the course of the blood in our veins, so do the terms applied to relationships point out the course of past history. In the first place, the moral condition of the lower races, wherever we can ascertain it, is actually higher than that indicated by the phraseology in use: and, secondly, the systems themselves are, in almost all cases, inexplicable, except on the hypothesis that they were themselves, preceded by still ruder ones.

* So that of many nations it may be said, literally as well as figuratively, that "les nations n'ont pas de cousins."

† Loc. cit., p. 35.

Take, for instance, the case of the Two-Mountain Iroquois: they call a mother's brother an uncle, but his son they regard as a brother. This is no accident, for the idea is carried out in the other relationships, and occurs also in other races. On the theory of progress it is easily accounted for: if a father's brother was previously called a father, his son would, of course, be a brother; and when the father's brother came to be distinguished as an uncle, some time would, no doubt, often elapse before the other changes, consequent on this step, would be effected. But how could such a system be accounted for on the opposite theory? How could a father's brother's son come to be regarded as a brother, if a father's brother had always been termed an uncle? The sequence of terms for the relationships connected with a father's sister, on the two hypotheses of progress on the one hand, and degradation on the other, may be illustrated as in the Table III (p. 27).

In the first, or lowest stage, the sequence is mother, brother, son, grandson, as in the Sandwich and Two-Mountain Iroquois system. In the next stage, the mother's sister being recognised, as an aunt, and the other relationships remaining the same, we have the sequence aunt, brother, son, grandson, as among the Micmacs. When a brother's son becomes a nephew, we have aunt, brother, nephew, grandson, as in the Burmese, Japanese, and Hindi systems. In the next stage, an aunt's son being distinguished as a cousin, we have aunt, cousin, nephew, grandson, as among the Tamils and Feejees. The two last stages would be aunt, cousin, aunt's grandson, grandson; and, lastly, aunt, cousin, aunt's grandson, aunt's great-grandson. Thus, out of these six stages, five actually exist.

On the other hand, on the theory of retrogression, we should commence with the highest system; namely, aunt, cousin, aunt's grandson, and aunt's great-grandson. The second, mother, cousin, aunt's grandson, aunt's great-grandson. The third, mother, brother, aunt's grandson, aunt's great-grandson. The fourth, mother, brother, nephew, aunt's great-grandson. The fifth, mother, brother, son, aunt's great-grandson. And the last, mother, brother, son, grandson. Thus, it will be observed that, except, of course, the first and last, they have not a stage in common; and, though there may be some doubt whether the sequence suggested on the second hypothesis is the one which would be followed, it cannot be maintained that we could ever have the systems which would occur in the case of progress, as shown in Table III, and the first four of which are actually in existence.

Whenever, then, the son or daughter of an uncle, or aunt, is termed a brother, as in the case of seven of the races referred to

in the Table, we may be sure that there was once a time when that uncle, or aunt, was termed a father or mother: whenever a cousin's son is termed a son, as again in seven races, we must infer, not only that those cousins were once regarded as brothers, but that brother's sons were once termed sons. Again, when great-uncles and aunts are termed grandfathers and grandmothers—when great-nephews and nieces are termed grandchildren, as in the case of all the races we have been considering, we have, I submit, good reason to infer that those races must once have had a system of nomenclature as rude as that of the Hawaiians or Kingsmill Islanders.

But it may be asked: admitting that the seventeen races, illustrated in Table I, are really advancing, are there not cases of the contrary? The answer is clear, out of the 139 races whose systems of relationship are more or less completely given by Mr. Morgan, there is not one in which evidence of degradation is thus indicated. To show this clearly and concisely, I have prepared the following table (p. 24). It will be seen that, taking merely the relation of uncles and aunts with reference to their children, there are 207 cases indicating progress. On the other hand there are four cases, the Cayuda, Onondaga, Oneida, and Mohawks, among whom, while a father's sister is called a mother, her son is called a cousin. These cases, however, are neutralised by the fact that the sons of these cousins are called sons. We have, therefore, a very large body of evidence indicating progress, and collected among very different races of men, while there appear to be none which favour the opposite hypothesis.

In my work on the Origin of Civilisation, I have endeavoured to show that relationship is, at first, a matter, not of blood, but of tribal organisation; that it is, in the second place, traced through the mother; in the third, through the father: and that only in the fourth stage is the idea of family constituted as amongst ourselves. To obtain clear and correct ideas on this subject, it is necessary to know the laws and customs of various races. The nomenclature, alone, would, in many cases, lead us into error, and, in fact, has often done so. When checked by a knowledge of the tribal rules and customs, it is, however, most interesting and instructive. From this point of view especially, Mr. Morgan's work is of great value. It has been seen, however, I differ greatly from him as to the conclusions to be drawn from the facts which he has so diligently collected.

Of course, I do not deny that these facts may, in some cases, indicate ethnological affinities; but they have not, I think, so great an importance in solving questions of ethnological relationships as he supposes; I do not, however, in any way, undervalue their import-

ance; they afford a striking evidence in favour of the doctrine of development, and are thus a very interesting and important contribution to the great problem of human history.

From the materials which he has so laboriously collected, and for which Ethnologists owe him an immense debt of gratitude, I have endeavoured to show :

Firstly, that the terms for, what we call, relationships, are, among the lower races of men, mere expressions for the results of marriage customs, and do not comprise the idea of relationship as we understand it: that, in fact, the connection of individuals *inter se*; their duties to one another; their rights; the descent of their property: are all regulated more by the relation to the tribe than by that to the family; that when the two conflict, the latter must give way.

Secondly, that the nomenclature of relationships is, in all the cases yet collected, explainable in a clear and simple manner on the hypothesis of progress.

Thirdly, that while two races in the same state of social condition, but, of which, the one has risen from the lowest known system, the other sunk from the highest, would, necessarily, have a totally different system of nomenclature for relationships; and that we have not a single instance of such a system as would result from the latter hypothesis.

Fourthly, that some of those races which approximate most nearly to our European system, differ from it upon points only explainable on the hypothesis that they were once in a much lower social condition than they are at present.

DISCUSSION.

Mr. W. C. DENDY expressed his admiration of the lucid mode in which Sir John Lubbock had illustrated his elaborate tables of affinity. In alluding to the similarity of appellations it was curious to note the almost identity of terms of relationship between races whose homes were half the globe asunder—Iroquois, Tamil, Feejeean, and Hawaiian—especially as the cranial forms (and may be the quality of the hemispherical ganglion) were in contrast. The frailty of their canoes or rafts would seem to contraindicate miscegenation or emigration, in explanation, or even the carnal intercourse of the sandal-wood traders. Granting the existence of such intercourse, however, it does not point to any grand ethnic principle, but rather the slavish adoption of the ideas of others by tribes of low intellect.

The author of this elaborate and valuable paper glances at his favourite theme, the emancipation from the primitive degradation of Man. It will require, however, more strict comparison between the present and remote conditions of races ere we may form inductions with regard to the development and progress of human intellect, especially as tradition and travel seem occasionally to demonstrate regress

1875	1876	1877	1878	1879	1880
Jan 1	Jan 1	Jan 1	Jan 1	Jan 1	Jan 1
Feb 1	Feb 1	Feb 1	Feb 1	Feb 1	Feb 1
Mar 1	Mar 1	Mar 1	Mar 1	Mar 1	Mar 1
Apr 1	Apr 1	Apr 1	Apr 1	Apr 1	Apr 1
May 1	May 1	May 1	May 1	May 1	May 1
Jun 1	Jun 1	Jun 1	Jun 1	Jun 1	Jun 1
Jul 1	Jul 1	Jul 1	Jul 1	Jul 1	Jul 1
Aug 1	Aug 1	Aug 1	Aug 1	Aug 1	Aug 1
Sep 1	Sep 1	Sep 1	Sep 1	Sep 1	Sep 1
Oct 1	Oct 1	Oct 1	Oct 1	Oct 1	Oct 1
Nov 1	Nov 1	Nov 1	Nov 1	Nov 1	Nov 1
Dec 1	Dec 1	Dec 1	Dec 1	Dec 1	Dec 1

1881	1882	1883	1884	1885	1886
Jan 1	Jan 1	Jan 1	Jan 1	Jan 1	Jan 1
Feb 1	Feb 1	Feb 1	Feb 1	Feb 1	Feb 1
Mar 1	Mar 1	Mar 1	Mar 1	Mar 1	Mar 1
Apr 1	Apr 1	Apr 1	Apr 1	Apr 1	Apr 1
May 1	May 1	May 1	May 1	May 1	May 1
Jun 1	Jun 1	Jun 1	Jun 1	Jun 1	Jun 1
Jul 1	Jul 1	Jul 1	Jul 1	Jul 1	Jul 1
Aug 1	Aug 1	Aug 1	Aug 1	Aug 1	Aug 1
Sep 1	Sep 1	Sep 1	Sep 1	Sep 1	Sep 1
Oct 1	Oct 1	Oct 1	Oct 1	Oct 1	Oct 1
Nov 1	Nov 1	Nov 1	Nov 1	Nov 1	Nov 1
Dec 1	Dec 1	Dec 1	Dec 1	Dec 1	Dec 1

1.	2. HAWAIIAN.	3. KINGSMILL.	4. Two-Mountain Iroquois.	5. MICMACS.	6.
Mother's brother	Parent male.	Father.	Uncle.	Uncle.	Father.
" " son	Brother, E. or Y.†	Brother, E. or Y.	Brother, E. or Y.	Brother, E. or Y.	Brother.
" " son's son, M.S.*	Child male.	Child male.	Son.	Son.	Nephew.
" " " F.S.	Child male.	Child male.	Son.	Nephew.	Nephew.
" " " grandson	Grandchild male.	Grandchild male.	Grandson.	Grandchild.	Grandchild.
Father's sister	Parent female.	Mother.	Mother.	Aunt.	Aunt.
" " son	Brother, E. or Y.	Brother, E. or Y.	Brother, E. or Y.	Brother, E. or Y.	Brother.
" " son's son, M.S.	Child male.	Child male.	Son.	Son.	Nephew.
" " " F.S.	Child male.	Child male.	Son.	Nephew.	Nephew.
" " " grandson	Grandchild male.	Grandchild male.	Grandson.	Grandchild.	Grandchild.
Father's brother	Parent male.	Father.	Father.	Little Father.	Father.
" " son	Brother, E. or Y.	Brother, E. or Y.	Brother, E. or Y.	Brother, E. or Y.	Brother.
" " son's son, M.S.	Child male.	Child male.	Son.	Son.	Nephew.
" " " F.S.	Child male.	Child male.	Son.	Nephew.	Nephew.
" " " grandson	Grandchild male.	Grandchild male.	Grandson.	Grandchild.	Grandchild.
Mother's sister	Parent female.	Mother.	Mother.	Little mother.	Mother.
" " son	Brother, E. or Y.	Brother, E. or Y.	Brother, E. or Y.	Brother, E. or Y.	Brother.
" " son's son, M.S.	Child male.	Child male.	Son.	Son.	Nephew.
" " " F.S.	Child male.	Child male.	Son.	Nephew.	Nephew.
" " " grandson	Grandchild male.	Grandchild male.	Grandson.	Grandchild.	Grandchild.
Grandfather's brother	Grandparent male.	Grandfather.	Grandfather.	Grandfather.	Grandfather.
" " sister	Grandparent female.	..	Grandmother.	Grandmother.	Grandmother.
Brother's son, M.S.	Child male.	Child male.	Son.	Son.	Nephew.
" " F.S.	Child male.	Child male.	Son.	Nephew.	Nephew.
Sister's son, M.S.	Child male.	Child male.	Nephew.	Nephew.	Nephew.
" " F.S.	Child male.	Child male.	Son.	Son.	Nephew.
Brother's son's son	Grandchild male.	Grandchild male.	Grandson.	Grandchild.	Grandchild.
Sister's son's son	Grandchild male.	Grandchild male.	Grandson.	Grandchild.	Grandchild.

* Male speaking or female speaking.

† Elder or Younger.

‡ Great or Little.

1.	2. RED KNIVES.	3. MUNSEE.	4. MICMACS.
Mother's brother	Uncle.	Uncle.	Uncle.
" " son	Brother, E. or Y.	Brother, E. or Y.	Brother.
" " son's son, M.S.	Son.	Son.	Son.
" " " F.S.	Son.	Son.	Nephew.
" " daughter's son, M.S.	Son.	Nephew.	Nephew.
" " " F.S.	Son.	Son.	Son.
" " grandson	Son.	Grandchild.	Grandchild.
Father's sister	Aunt.	Aunt.	Aunt.
" " son	Brother, E. or Y.	Brother, E. or Y.	Brother.
" " son's son, M.S.	Son.	Son.	Son.
" " " F.S.	Son.	Son.	Nephew.
" " daughter's son, M.S.	Son.	Nephew.	Nephew.
" " " F.S.	Son.	Son.	Son.

TABLE I.—SYSTEMS OF RELATIONSHIPS.

6.	7.	8.	9.	10.	11.	12.
BURMESE.	JAPANESE.	WYANDOT. §	TAMIL. †	FEEJEEAN.	TONGAN.	KAFFIR.
Father, G. or L. † or uncle.	Second little father.	Uncle.	Uncle.	Uncle.	Uncle.	Uncle.
Brother, E. or Y. Nephew. ?	Brother, E. or Y. Nephew. ?	Cousin. Son. Nephew. Grandson.	Cousin. Nephew. Son. † Grandson.	Cousin. Nephew. Son. † Grandson.	Cousin. ? ? ?	Cousin. Son. ? Grandchild.
Grandchild.	Grandson.					
Aunt, G. or L.	Little mother, or aunt.	Aunt.	Aunt.	Aunt.	Aunt.	Father.
Brother, E. or Y. Nephew. ?	Brother, E. or Y. Nephew. ?	Cousin. Son. Son. Grandson.	Cousin. Nephew. Son. Grandson.	Cousin. Nephew. Son. Grandson.	Cousin. ? ?	Brother, E. or Son. ? Grandchild.
Grandchild.	Grandson.					
Father, G. or L.	Little father, or uncle.	Father.	Father, G. or L.	Father.	Father.	Uncle.
Brother, E. or Y. Nephew. ?	Brother, E. or Y. Nephew. ?	Brother, E. or Y. Son. Son. Grandson.	Brother, E. or Y. Son. Nephew. Grandson.	Brother, E. or Y. Son. Nephew. Grandson.	Brother. Son. Boy. Grandson.	Brother, E. or Son. ? Grandchild.
Grandchild.	Grandson.					
Mother, G. or L.	Little mother, or aunt.	Mother.	Mother.	Mother.	Mother.	Aunt.
Brother, E. or Y. Nephew. ?	Brother, E. or Y. Nephew. ?	Brother, E. or Y. Son. Nephew. Grandson.	Brother, E. or Y. Son. Nephew. Grandson.	Brother, E. or Y. Son. Nephew. Grandson.	Brother. Son. Boy.	Brother, E. or Son. ? Grandchild.
Grandson.	Grandson.					
Grandfather.	Grandfather.	Grandfather.	Grandfather.	Grandfather.	Grandfather.	Grandfather.
Grandmother.	Grandmother.	Grandmother.	Grandmother.	Grandmother.	Grandmother.	Grandmother.
Nephew. Nephew. Nephew. Nephew. Grandchild. Grandchild.	Nephew. Nephew. Nephew. Nephew. Grandson. Grandson.	Son. Nephew. Nephew. Son. Grandson. Grandson.	Son. Nephew. Nephew. Son. Grandson. Grandson.	Son. Nephew. Nephew. Son. Grandson. Grandson.	Son. Nephew. Nephew. Boy. Grandson. Grandson.	Son. Son. Son. son. Grandchild. Grandchild.

† Great or Little.

§ The Seneca substantially agrees.

† The Telugu and Canarese substantially agree with

TABLE II.—SYSTEMS OF RELATIONSHIPS.

4.	5.	6.	7.	8.	9.	10.
MICMAC.	DELAWARE.	CROW.	REPUBLICAN PAWNEE.	GRAND PAWNEE.	CHEROKEE.	HARR.
Uncle.	Uncle.	Elder Brother.	Uncle.	Uncle.	Uncle.	Mother's brother.
Brother, E. or Y.	Stepbrother.	Son.	Child.	Child.	Child.	Cousin.
Son.	Stepbrother.	Grandchild.	Grandson.	Grandchild.	Grandchild.	Son.
Nephew.	Stepbrother.	Grandchild.	Grandson.	Grandchild.	Grandchild.	?
Nephew.	Son.	Grandchild.	Grandson.	Grandchild.	Grandchild.	Son.
Grandchild.	Son.	Grandchild.	Grandson.	Grandchild.	Grandchild.	Son.
Aunt.	Grandchild.	Grandchild.	Nephew.	Grandchild.	Grandchild.	Grandson.
Brother, E. or Y.	Little mother.	Mother.	Mother.	Mother.	Aunt.	Aunt.
Son.	Stepbrother.	Father.	Father.	Father.	Father.	Cousin.
Nephew.	Son.	?	Brother.	Father.	Father.	Son.
Nephew.	Son.	?	Brother.	Father.	Father.	Son.
Son.	Nephew.	?	Father.	Brother.	Father.	Son.
Son.	Son.	?	Father.	Brother.	Father.	Son.

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SHIPS.

11. ONGAN.	12. KAFFIR.	13. MOHIGAN.	14. HINDI.	15. CREE.	16. OJIBWA (Lake Michigan).	17. KAREN.	18. * ESQUIMAUX. (Northumberland Inlet.)
	Uncle.	Uncle.	Uncle.	Uncle.	Uncle.	Uncle.	Uncle.
	Cousin.	Stepbrother.	Brother.	Cousin.	Cousin.	Cousin.	Cousin.
	Son.	Stepchild.	Nephew.	Stepson.	Stepson.	Nephew.	Nephew.
	Grandchild.	Grandson.	Grandson.	Grandchild.	Grandchild.	Grandson.	Grandchild.
	Father.	Stepmother.	Aunt.	Aunt.	Aunt.	Aunt.	Aunt.
	Brother, E. or Y.	Stepbrother.	Brother.	Cousin.	Cousin.	Cousin.	Cousin.
	Son.	Stepchild.	Nephew.	Stepson.	Stepson.	Nephew.	Nephew.
	Grandchild.	Grandchild.	Grandson.	Nephew.	Nephew.	Grandson.	Nephew.
	Uncle.	Stepfather.	Uncle.	Grandchild.	Grandchild.	Grandson.	Grandchild.
	Brother, E. or Y.	Stepfather.	Brother.	Stepfather.	Stepfather.	Uncle.	Uncle.
	Son.	Stepchild.	Nephew.	Brother, E. or Y.	Stepbrother.	Cousin.	Cousin.
	Grandchild.	Grandchild.	Grandson.	Stepson.	Stepson.	Nephew.	Nephew.
	Aunt.	Mother.	Aunt.	Nephew.	Grandchild.	Grandson.	Grandchild.
	Brother, E. or Y.	Brother, E. or Y.	Brother.	Stepmother.	Stepmother.	Aunt.	Aunt.
	Son.	Stepchild.	Nephew.	Brother, E. or Y.	Stepbrother.	Cousin.	Cousin.
	Grandchild.	Grandchild.	Grandson.	Stepson.	Stepson.	Nephew.	Nephew.
	Grandfather.	Grandfather.	Grandfather.	Nephew.	Grandchild.	Grandson.	Grandchild.
	Grandmother.	Grandmother.	Grandmother.	Grandchild.	Grandfather.	Grandfather.	Grandfather.
	Son.	Stepson.	Nephew.	Grandmother.	Grandmother.	Grandmother.	Grandmother.
	Son.	Nephew.	Nephew.	Stepson.	Stepson.	Nephew.	Nephew.
	Son.	Nephew.	Nephew.	Nephew.	Nephew.	Nephew.	Nephew.
	Son.	Son.	Stepson.	Stepson.	Stepson.	Nephew.	Nephew.
	Grandchild.	Grandchild.	Grandson.	Grandchild.	Grandchild.	Grandson.	Grandchild.
	Grandchild.	Grandchild.	Grandson.	Grandchild.	Grandchild.	Grandson.	Grandchild.

see substantially agree with the Tamil.

† Eighteen American Races agree with the Tamil and Fesjeean on this point.

SHIPS.

10. HARE.	11. OMAHA.	12. SAWK AND FOX.	13. ONEIDA.	14. OTAWA.	15. OJIBWA (Lake Superior).
Mother's brother.	Uncle.	Uncle.	Uncle.	Uncle.	Uncle.
Cousin.	Uncle.	Uncle.	Cousin.	Cousin.	Cousin.
Son.	Uncle.	Uncle.	Son.	Stepson.	Stepson.
?	Uncle.	Uncle.	Son.	Nephew.	Nephew.
Son.	Brother, E. or Y.	Brother, E. or Y.	Nephew.	Nephew.	Nephew.
Son.	Brother, E. or Y.	Brother, E. or Y.	Son.	Son.	Stepchild.
Grandson.	Uncle.	Uncle.	Grandson.	Grandchild.	Grandchild.
Aunt.	Aunt.	Aunt.	Mother.	Aunt.	Aunt.
Cousin.	Nephew.	Nephew.	Cousin.	Cousin.	Cousin.
Son.	Grandchild.	Grandchild.	Son.	Stepson.	Stepson.
Son.	Grandchild.	Grandchild.	Son.	Nephew.	Nephew.
Son.	Grandchild.	Grandchild.	Nephew.	Nephew.	Nephew.
Son.	Grandchild.	Grandchild.	Son.	Son.	Stepchild.

TABLE III.—SYSTEMS OF RELATIONSHIP UPON THEORY OF PROGRESS.

	FIRST STAGE.*	SECOND STAGE.†	THIRD STAGE.‡	FOURTH STAGE.§	FIFTH STAGE.	SIXTH STAGE.||
Father's sister	Mother.	Aunt.	Aunt.	Aunt.	Aunt.	Aunt.
" "	Brother.	Brother.	Brother.	Cousin.	Cousin.	Cousin.
" " son	Son.	Son.	Nephew.	Nephew.	Aunt's grandson.	Aunt's grandson.
" " " son..	Grandson.	Grandson.	Grandson.	Grandson.	Grandson.	Aunt's great-grandson.

* This is the system of the Sandwich Islands, Kingsmill Islands, Two-Mountain Iroquois, etc.

† This is the system of the Burmese, Japanese, Hindi.

‡ This is the system of the Tamil and Feejeean systems.

§ This is the system of the Micmacs.

|| Our system.

SYSTEMS OF RELATIONSHIP UPON THEORY OF DEGRADATION.

	FIRST STAGE.	SECOND STAGE.	THIRD STAGE.	FOURTH STAGE.	FIFTH STAGE.	SIXTH STAGE.
Father's sister	Aunt.	Mother.	Mother.	Mother.	Mother.	Mother.
" " son	Cousin.	Cousin.	Brother.	Brother.	Brother.	Brother.
" " " son	Aunt's grandson.	Aunt's grandson.	Aunt's grandson.	Nephew.	Son.	Son.
" " " son..	Aunt's great-grandson.	Aunt's great-grandson.	Aunt's great-grandson.	Aunt's great-grandson.	Aunt's grandson.	Grandson.

of even enlightened people, as in Assyria, Arabia, and Egypt—nomadic tribes now wandering among the ruins of these once gorgeous temples.

Regarding the islanders of Oceania, it is clear that they are now about in the same state as when Cook and other navigators, in the past century, lighted on their shores.

Mr. HYDE CLARKE observed that it was not impossible to establish a linguistic connection among the several groups, which had been regarded as incapable of the intercommunication of such terms as those recorded by Sir John Lubbock. Thus, in the neighbourhood of the Karen were the linguistic analogues of Sour or Savara. This and the Thug showed relationship with the Esquimaux, and so with the adjoining American tribes, and thus two extremes were brought together; again, there were ancient grammatical relationships between the languages of High Asia (as the Caucaso-Tibetan group) and those of the Caffre tribes in South Africa. He would proceed further to illustrate a point in Sir John's first class, and on which there was a note in his *Origin of Civilisation*, which contained the germ of a series of interesting facts, illustrative of the origin of words. It is the accepted belief that "mother" (*Maker, Meker, Ma, Ama*, etc.) and "father" are the most ancient words, and various reasons have been given for *Ma* being a natural effort of all children. This, however, is nothing more than an error. *Ba* and *Ma* cannot be accepted as the first words, nor as distinctive of Father and Mother. Just as in Hawaiian, the earliest idea was of Parent, and that of Male and Female Parent came after. This is shown by the fact that there are several roots, *Ma, Ta (Da), Sa, Ba (Pa), Wa, Na, Ya*, signifying either Father or Mother, according to the language in which employed. *Ma* is used as Mother in a most extensive class of languages, but it is Father in Georgian and Manchoo, Mon (Siam), Tuluva, Australian, Irula, and Tlatskana (N. W. America). *Pa* is Mother in Australian and Tuluva (India). *Da* is Mother in some African languages; *Wa* is Father in Savara, Yarukala, W. Africa, etc.; but Mother in Irula, etc. *Ya* is Father in Chinese, in Japanese Toda, etc.; but Mother in Talain, Circassian, Tibetan, Kolarian, Dravidian, etc. Some languages retain still several roots. Thus Gondi (India) uses for Mother *Ba, Ma, Ya, Wa*. The process of selecting for father, mother, grandmother (old woman, nurse) etc., from the roots for Parent was comparatively late. The original root appeared to be *A* worked with the affixes of ancient comparative grammar, *M, T (D), S, B (P, W), N*, and perhaps *L*. He considered one practical value of Sir John's paper was that it gave us a new means of testing the spread of common ideas and terms among various races.

Mr. C. S. WAKE said that much light was thrown on the source of the curious classification of relationships treated of in Sir John Lubbock's very valuable paper by tracing the original meaning of the words used. Taking those which, according to Mr. Morgan, are employed by the Sandwich Islanders, it is evident that they embody certain ideas which are applicable to general rather than to particular classes. Thus,

kupuna (a great-grandfather, &c.) means "an ancestor", and implies the idea of a *source* or *spring*, and also of *growth*; *makua kana* (father, uncle, &c.) signifies "full-grown man"; *makua wahina* (mother, aunt, &c.) is "full-grown woman"; *kaikee kana* (son, nephew, &c.) is literally the "child (or 'small') man"; *hunona* (a niece- or nephew-in-law) appears to be connected with the Vitian *none*, a "child", *vuno*, a "child-in-law". The words *kana* (man), and *wahina* (woman), would seem to be themselves explainable in a similar manner. The former is probably connected with *kano*, which means "the inmost substance of a thing, the flesh"; and the latter may be traced to a root signifying "to feed, nourish", found also in *ohana*, a "family".

MR. BLYTH, MR. LUKE BURKE, and MR. A. L. LEWIS, also joined in the discussion.

SIR JOHN LUBBOCK observed that he had not overlooked the cases of decadence mentioned by Mr. Dendy; nor had he ever denied that particular races might sink in the scale of civilisation; he maintained, however, that such races also diminish in numbers; that progressive races tend to encroach on those which are falling back, so that, as a whole, the history of mankind is one of progress. He also briefly referred to the other points raised in the discussion.

ORDINARY MEETING, MARCH 6TH, 1871.

DR. CHARNOCK, F.S.A., *Vice-President, in the Chair.*

THE Minutes of the last Meeting were read, and confirmed.

The following new members were announced: CUDDALORE PUTTAH LUTCHMEEPATHY NAIDOO GAROO, 14, Frederick Street, Gray's Inn Road, W.C.; HENRY COOK, Esq., Wantage, Berks; DANBY P. FRY, Esq., Poor Law Board, Whitehall Place, S.W.; CHARLES EDWARD MOORE, Esq., Middle Temple, E.C.; JOSEPH SHARPE, Esq., LL.D., 36, Queensborough Terrace, Hyde Park, W.; JESSE TAGG, Esq., 5, Outram Villas, Addiscombe; and W. J. W. VAUX, Esq., M.A., F.R.S., Royal Society of Literature, (*Honorary Member*).

The following presents were announced, and the thanks of the meeting voted to the respective donors:—

FOR THE LIBRARY.

From Dr. THURNAM, F.R.S.—Ancient Rock-Tombs at Ghain Tiffha and Tal Horr, and the Human Remains found therein.

From Dr. J. BARNARD DAVIS, F.R.S.—*Del Cervello nei due Tipi brachicefalo e dolicocefalo italiano.* By Prof. C. Luigi Calori.

From the AUTHOR.—*The Descent of Man, and Selection in Relation to Sex.* By Charles Darwin, M.A., F.R.S., etc. 2 vols.

- From the AUTHOR.—The Rajas of the Punjab. By Lepel H. Griffin.
 From the SOCIETY.—Proceedings of the Society of Antiquaries of London ; vol. iv, No. 9.
 From the SOCIETY.—Proceedings of the Society of Antiquaries of Scotland ; vol. vii, part 2.
 From the SOCIETY.—Journal of the Asiatic Society of Great Britain and Ireland ; vol. v, part 1.
 From the ASSOCIATION.—Transactions of the National Association for the Promotion of Social Science. 1870.
 From G. TATE, Esq.—Proceedings of the Berwickshire Naturalists' Club. 1870.
 From the EDITORS.—Archivio per l'Antropologia e la Etnologia. By Dr. Paolo Mantegazza and Dr. Felice Finzi. Vol. i, fascicolo 1.
 From the EDITOR.—The Journal of Psychological Medicine, vol. iv, No. 5, and vol. v, No. 1.
 From the EDITOR.—The Food Journal for February, 1871.
 From the EDITOR.—Nature, to date.

Col. A. LANE FOX exhibited a worked flint of horse-shoe form, armed with processes on the outer margin, said to have been brought from Mexico ; and pointed out its resemblance to a specimen from Honduras, now in the Blackmore Museum.

Mr. BLYTH exhibited a flint celt found in gravel at Tooting ; specimens of grass cloth from the Lagos country, W. Africa ; and two similar necklaces of lignite beads, one from the Andaman Islands, and the other from Lagos.

Mr. JOSIAH HARRIS read an extract from a letter from his son, Mr. J. D. Harris, of the Macabi Islands, Peru, referring to the discovery of a stratum of rags about five feet in thickness, occurring at a depth of eight feet from the surface, and extending over the whole of the North Island.

The following Paper was then read by the author :

II.—*On the RACIAL ASPECTS of the FRANCO-PRUSSIAN WAR.*
 By J. W. JACKSON, Esq., M.A.I.

THE day is obviously approaching when considerations based on the facts affirmed, if not revealed, by Anthropology, will seriously influence the purposes of statesmen, and permanently modify the councils of princes. Dynastic interests are no longer the supreme element in human affairs. The wishes of peoples as well as the desires of their rulers have now to be consulted. The rude ambition which would despise racial landmarks is now admitted to be of that unsafe kind which does o'erleap itself. Thus, perhaps, it is not too much to say that a merely imperial agglomeration of diversely descended peoples, held together only by the iron vinculum of the sword, such as Austria once

presented, could not now be established; or, if founded as a result of overwhelming military force, could not be rendered permanent. A power thus constituted would soon crumble to pieces of its own weight, and from want of all true cohesion among its constituent parts. The tendency to this is seen even where the nucleus of an empire is composed of one decidedly and numerically predominant people, as in the case of Russia, while in the instance of Turkey, where the governing race are merely immigrant conquerors, the ethnic diversity of their subjects is proving hopelessly fatal to the very existence of the State.

Monarchs and their ministers, however, are not the only persons who find the race-question too strong for them. Theoretical legislators, like Bentham, and political economists, like John Stuart Mill, together with all those zealous, but rather injudicious, philanthropists who deem it necessary to the success of their benevolent undertakings to deny the radical diversity, while they imply if they do not affirm the mental, if not the physical equality of races, are beginning to admit that ethnic specialities are something more than a surface phenomenon; structure being connected with, and so in a sense indicative of, character. In truth, events, and those, too, of the gravest character, are every day forcing anthropological facts upon the notice of the public, and compelling even the most indifferent, or the most unwilling, to reflect on the specialities of race. And now, as if to confirm us in our views as to the paramount importance of ethnic data, we have the almost pre-historic conflict between Celt and Teuton renewed, not only in all its former force and virulence, but with a certain increase of intensity, due perhaps in part to the scientific appliances and locomotive instrumentalities of modern civilisation, which has thus done more to arm the combatants with weapons and provide them with opportunities for mutual destruction than to diminish their ferocity by the culture of those arts, which, according to certain literary authorities, both ancient and modern, are so favourable to the softening of manners. Having, then, in some former papers in the *Anthropological Review* already contemplated the relations and characteristics of the Roman and the Teuton (Jan. 1866), as well as the Roman and the Celt (April, 1867), it may not perhaps be amiss to complete this division of our subject-matter by contemplating Teuton and Celt, not so much in their relation to the great imperial people of antiquity as to each other, and to the remaining peoples and nationalities of Europe and the world.

To the true student of anthropology few things are more patent, and nothing is more mortifying, than the limitation of

his knowledge. In every direction anything approaching to profound investigation leads him to impassable barriers. Look where he may he is everywhere confronted by insoluble problems, by facts of which he has not ascertained the cause, and results of which he does not understand the processes. And among these mortifying limitations, none are more remarkable than his inability to discover the origin and assign the primal habitat of that Aryan race, of one of whose many families he is presumably a member. Nay, the later history of these families, the age when, and the place where, they commenced as distinct varieties, is still matter of controversy, or rather of the vaguest speculation, in which opinion dominates fact, and preconceived ideas assume the place of ascertained data. It is no wonder, therefore, that we cannot even pretend to trace the origin of the Celtic and Teutonic families of Europe. It will be well, indeed, if we should, even by remote approximation, succeed in defining them.

In "The Aryan and the Semite" it was shown that one speciality of the Hebrew division of the Semitic family, consisted in their geographical position, in virtue of which they could not be easily or even directly invaded and colonised by the ruder Negroid tribes on the south, or the coarser Turanians from the north; one result of this more favourable position being a higher type and greater purity of blood on their part than on that of some of their Amharic and Aramaic kinsmen. Now, a similar remark is applicable to the Celts of Gaul, and, I may add, of Britain, as compared with other Aryan peoples of Europe. They are shut in from Tartarian invasion on the north and east by the Slavons and Teutons, and from Moorish invasion on the south by the Iberians, the result of which is that they present a higher nervous type, and are consequently endowed with more sensibility, susceptibility, and intensity of thought and feeling than their neighbours. This more powerful development of the nervous system as contradistinguished from the osseous and the muscular, constitutes indeed the distinctive characteristic of the Celt; that by which more especially he is separated as a variety from the heavier Teuton and harsher Iberian, and in which he transcends the classic ancients, and equals, if he does not surpass, the modern Italian. Now a people so constituted cannot fail, when civilised, to be brilliant and imposing in their era of national energy and force; but they will be liable to periods of fearful collapse, which would eventually become irremediable but for their racial baptism and renewal through the conquests and colonisation at appropriate ethnic periods, by the stronger Teuton.

Have we not in these few remarks a key to the history of

France, whether in ancient or modern times? The centre of at least the continental portion of the great Celtic area of the west, it seems, in conjunction with Britain, to have suffered from the collapse of energy and vigour, which in due sequence succeeded that period of greatness during which Brennus marched on Rome. Not that we regard this last event as marking the culminating period of prehistoric Celtic power and culture, which probably synchronised with, if it did not precede, that now almost monumental age of civilisation, of which we have such a living picture in the *Iliad*, and which we find represented on the tombs of the Egyptian kings, when the war-chariot constituted the most salient feature on the battle field, and when, at least in India, Chaldea, Assyria, Egypt, Gaul, and Britain, a high and holy priesthood, under whatever title, whether as Brahmans, Magi, or Druids, exercised a sacerdotal sway, of which that of the Romish clergy in the middle ages, was but a feeble echo. Without affirming with my friend, Mr. Luke Burke, that the Celts originated this early phase of civilisation, I think we are fully justified in affirming that they shared in it; Gaul and Britain constituting an integral portion of the area over which it prevailed.

We may now begin to understand the ethnic significance of the Roman conquest of Gaul. It was only possible as a result of that moral and physical collapse of the Celtic peoples which had succeeded their period of pre-historic power. But both the collapse and the conquest and colonisation which followed it, were partial as compared with that greater ethnic movement which accompanied the fall of the Roman empire, and eventuated in the immigration of the Franks. These conquests and colonisations from the south, however, demand much greater attention than they have yet received from anthropologists. We have been so accustomed, from what may be called our school histories, to regard the great conquering immigrations as necessarily coming from the north, that we can hardly realise the ethnic fact that Phœnician, Carthaginian, Roman, and Moorish conquest and occupation proceeded in an opposite direction. That of Rome, with which we have now to do, was a part of the great north-western movement of empire and civilisation, which constitutes the world-history of the last four thousand years. And we are not perhaps far wrong in saying that its effects were moral rather than physical, and are at present more manifest in the language than the ethnic type of the modern Gaul. Quite certain it is that Gaul was not racially regenerated by the Roman conquest. On the contrary, her people, in common with nearly all the European and Asiatic provincials, were left, as perhaps they were found, in a state of ethnic effeteness and prostration. The only true racial baptism of the Gauls within the period of

authentic history was that of the Teutons, mostly under the name of Franks, though by no means confined to that particular stock. Not so thorough and effective as that of England by the Saxons, Jutes, and Frisians, or that of Scotland by the Scandinavians, it nevertheless enabled France to take her place among the regenerated countries of western Europe, and even to worthily fulfil her exalted vocation as the *quasi* imperial centre of modern civilisation. This, perhaps, demands some little explanation.

From the dawn of history to at least the decline and fall of the Roman empire, civilisation seems ever to have tended to focalise its intellectual refinement and material resources upon some one centre, and so become for a time the especial appanage of one peculiarly favoured and imperial people. Assyria, Persia, Greece, and Rome are instances in point. Now, in a theological and ecclesiastical sense, no doubt, the Papacy was the successor of the latter. But socially and intellectually, if not also politically, the imperial mission, in so far as it has devolved on any one country, has been discharged by France; and she has done this, let us remember, upon the ethnic vigour and renovated racial force obtained through her Teutonic baptism.

But the colonisation of a Celtic area by Teutonic conquerors, however effective at the moment, can only be temporary in most of its effects; the sole permanent result apparently obtainable from the colonial extension of an alien people over a foreign area, being the mental and physical renewal, and in favourable cases, perhaps, the racial growth and development of the native and appropriate type of the country. Thus it is that the French of to-day, after twelve hundred years of Frankish occupation, are still the Gauls so vividly portrayed in the pages of Cæsar's "Commentaries"—more civilised and more cultured, but still the same impulsive, excitable, and variable people they were in the age of the mighty Roman. This brings us to the especial subject-matter of our present paper, namely the ethnic condition of the French people, and its relation to the momentous events with which we are cotemporary.

In some former papers, more especially the one on "Race in Religion," (October, 1866) I have endeavoured to show that the Celt, though less adapted to a theological mission than the Jew, and less artistic than the Greek, is nevertheless, from the refinement and spirituality of his nature, and the intuitive character of his intellect, to be accounted as among the most gifted of the sons of men. Beyond all question he is the most susceptible. Now a people so constituted will be especially liable to exhaustion, both individually and collectively, from the too rapid expenditure of their vital force, whether through their

passional impulses or intellectual activities, and will consequently need a more frequent or a more thorough baptism from their muscular correlates, than in the case of races less sensitive or less gifted. Now if these remarks are at all applicable to the Celts as a whole, they are emphatically true of the French,—being, as we have remarked, the key to their entire history. As a farther illustration of my meaning in this sentence, let me refer you to those portions of my former papers, already published in the *Anthropological Review*, in which I have endeavoured to show that the Celtic, like the Classic area, is duplex and bipolar; the French, in this epicycle of a previous era, representing the Greeks, while conversely the English are a maritime and insular reproduction of the Romans.

It is doubtful whether we yet fully understand the Gothic conquest of the Roman empire. For the most part we behold it through the spectacles of monkish chroniclers, and so unduly exaggerate the barbarism of the conquerors, and the evils of the conquest. Both the language and institutions of the Romanesque or Latin nations demonstrate that the invasion was less destructive than it is usually represented. But if less destructive, then, perhaps, we are justified in saying less recuperative. Now these remarks apply in an especial manner to Gaul, where the infusion of Teutonic blood over a large portion of its area was barely sufficient for founding a feudal nobility, as the Frankish lords of a Celtic peasantry. It was otherwise in Normandy and some of the Rhenish provinces, where the Teutonic infusion was adequate, as in England, to the ethnic regeneration of the great body of the people. The subsequent history of France thus becomes easily explicable. The Celtic population, refined but not regenerated by the Roman conquest, yielded like the other provincials to the great Gothic inundation, which, however, in their case was rather a military conquest than a true racial immigration. Two results followed. The old civilisation, as in Italy, being but imperfectly submerged, soon re-appeared; but conversely, the old ethnic effeteness, being also but slenderly supplemented, has again become manifest, and the French are once more Celts, exhausted by an era of empire and civilisation, and so awaiting their inevitable baptism of bone and muscle at the hands of their Teutonic, and perhaps, also yet more remotely, their Slavonic neighbours.

As thus succinctly stated, I am well aware that this must sound very much like a plausible hypothesis, opportunely propounded to account for passing phenomena; but in truth it is not a new idea formed under the influence of recent events, but a conclusion deliberately arrived at from ethnic data many years since, and either alluded to or directly enforced, not only in

several of my papers in the *Review*, but also in my work on Ethnology, published in 1863, where, under the head of "France," I have pointed out the probability of an ultimate reconquest and re-occupation of Gaul by Teutonic invaders.

Thus contemplated, the ethnic history of the Frankish conquest of Gaul is easily understood. A body of comparatively rude, though brave warriors, settled down as victorious and invading colonists among a people not only more civilised, but also more nervous and organically refined than themselves—as a result they soon adopted both the religion and the language of their subjects; unfortunately, in process of time they also adopted their manners and morals, and so became the most gallant and accomplished, and perhaps, with the exception of the Italians, the most profligate nobility in Europe. This was the condition of the French court from at least the decline of chivalry to the revolution, although even as early as the days of St. Louis, a decidedly Celtic type of character is perceptible in the nobility, and more especially what we should call the gentry, of France. The Teutonic element in the south and centre was becoming absorbed, and as a result feudalism disappeared, and was superseded by clanship, the clan in this instance, however, being the nation, and its chief, the Grand Monarque.

The age of Louis XIV was to France what that of Pericles was to Athens, and that of Augustus to Rome,—the culminating point of a mingled race; that is, the period when a subdued but gifted people of high nervous temperament, having thoroughly re-absorbed their alien conquerors, once more emerged into their appropriate activity and splendour of intellectual manifestation, characteristic of their type in its periods of positive energy and creative power. In saying this, it must not be supposed that we would rigidly limit modern Gaul's period of intellectual supremacy to the reign of her most distinguished monarch. In letters it extended to the death of Voltaire; in science to that of Cuvier. During the latter part of the seventeenth and most of the eighteenth century, the scholars and *savants* of France ruled the more cultured classes of the civilised world as acknowledged autocrats. Even in the youth of men not yet more than elderly, Paris was the world's centre of scientific activity, whereto the most advanced minds of England and Germany willingly resorted for the completion of their higher education, and whence issued those ideas and systems which have acted as the great moulds of thought to our own time. But, alas, how is all this now altered. Where are the successors of D'Alembert and Lavoisier, of Cuvier and La Place? Where are the rivals of Racine and Corneille, of Bossuet and Voltaire? There are still plenty of men of talent, but

where are the colossal master-minds, each a sun in his own sphere, who made Paris not only the glory of France, but by universal acknowledgment the intellectual metropolis of modern civilisation. They have departed, and left none worthy to fill their exalted thrones and draw that reverential regard once so loyally accorded to the leaders of French intelligence, as men beyond dispute in the vanguard of European progress.

Now it is worthy of remark in this connection, where our purpose is to show the gradual absorption of the Teutonic, and the emergence of the Celtic type, that whether in her present decadence or in her palmiest days of intellectual splendour, the literature of France was not Germanic but essentially Gallic in character, being distinguished by beauty and polish rather than depth and earnestness; the form being obviously regarded as of more importance than the matter; the graces of style holding the first place, grandeur of thought and sublimity of sentiment the second. It is the same with French art, which, less pure and therefore less elevated than the Greek, is nevertheless eminently decorative and ornamental in its lower phases, being the product of refined taste rather than creative power. Similar remarks are applicable to French music, which, faultless as regards glaring defects, is nevertheless wanting in depth of feeling and power of expression, being obviously the product of a mental constitution less vast and massive than the German. We suppose it is almost needless to say that French diplomacy is also eminently Gallic, being distinguished rather by fine tact and delicate finesse than by that profound subtlety so characteristic of the Italians.

We can readily understand that a people thus characterised would be eminently brilliant in their military undertakings, their successes, however, being generally short-lived, and more productive of present glory than of solid and lasting advantages. These qualities were manifested under the great Marshals of the Grand Monarque; but they culminated, and we may add collapsed, under the First Napoleon, while unfortunately they collapsed without culminating under the Third.

The French, then, are and have long been Gauls, not Franks. They would, doubtless, eventually have become so, through the slow but sure process of racial absorption and amalgamation, whereby alien intruders on a foreign area are eventually lost in the native type. But two events of comparatively recent occurrence have materially contributed to and doubtless hastened the completion of this result. We allude to the massacre of St. Bartholomew and the Revocation of the Edict of Nantes on the one hand, and the revolutionary slaughter of the French nobility on the other. By the first a large number of those who inclined

to the doctrines of the Reformation, which as a Teutonic movement doubtless attracted the Teutonically constituted minds of the country to its standard, were either slain or expatriated, while a similar fate attended the remains of the Frankish nobility at the hands of the ferocious republicans of 1793.

Do we not see the effect of these destructive processes in that absence of master-minds by which France has been unhappily characterised during the last generation? This dearth of all commanding genius having at last manifested itself not only in the sphere of thought but also of action, so that the greatest military power in Europe has suddenly, and we may almost say shamefully, succumbed in one short campaign, partly, no doubt, from the frightful corruption pervading every department of the imperial Government, but in part also from the lamentable fact that France in her hour of crisis has found no soldier competent to the true leadership of her gallant legions. She has brave men, but she has no generals. The country whereto our ablest officers once resorted as the especial school in which to learn the art of war, is now without a single strategist to marshal her forces. Is she not also without a single statesman competent to the guidance of her fortunes? Neither is this phenomenon altogether new, for at the first revolution, after the death of Mirabeau, what remained for France but a choice between chaos and the Corsican—whose nephew, alas! has not proved a reproduction of his uncle.

Is there not a fatal evidence of weakness in this repeated resort of a great people to foreign leadership? Had not Rome her Cæsar, England her Cromwell, and America her Washington under the like trying circumstances? Why, then, was France compelled to have recourse to the Buonapartes, and why, when the second proved a failure in her hour of need, has she shown herself so pitifully devoid of all true self-help in his absence? There is, we fear, but one reply. France is not what she was in literature, science, or art, in statesmanship, diplomacy, or war; and so denuded of her great men, devoid of those elements of genius that once made her the envy and the admiration of surrounding nations, her soldiers are defeated, despite their valour, in every battle; and she who was the terror is now an object of pity to the civilised world.

Having thus surveyed the French, let us now glance at the Germans. The Teutons have done great things in the world. As we have said they conquered the Roman empire, and they inaugurated the Reformation. Tall of stature and large of limb, fair-haired and blue-eyed, they present us, more especially in the Scandinavian variety, with the beau ideal of robust, vigorous,

and large-hearted humanity, dwelling in a temperate clime. They are framed on a grand scale, and are obviously intended as providential instruments for the effectuation of vast deeds and the utterance of profound thoughts. They are as yet but in the morning of their blushing youth, which, however, gives promise of a most heroic and imperial manhood. They are the reserve force of the West, which always comes into play when the more nervous races have been exhausted by the morbid excitement of their corrupt civilisation. They are the osseous and muscular pole of European humanity. To them we owe the regeneration not merely of Spain and Italy, but also of Gaul and Britain, after the decline of ancient civilisation. Modern Europe is largely of their making. Its feudalism was of their founding, and its institutions bear everywhere considerable traces of their influence. It is impossible to over-estimate our obligations to such a race. They made mediæval Italy to differ from Greece, and it is their larger presence in Britain which differentiates her from ethnically exhausted France.

They are the greatest musicians in the world, the massiveness and grandeur of their nature being more especially reflected in the wondrous sublimity and power of the oratorio. Handel, Haydn, Mozart, and Beethoven are still unrivalled as the masters of composition; Kant, Hegel and Fichte, Goethe, Richter, and Schiller are an earnest of their ability for philosophy and letters; while Humboldt, Oken, and Linnæus show us what they can accomplish in science. Martin Luther, the greatest reformer in the past, and Moltke, the greatest strategist in the present, are also of this commanding race. Such spirits are an earnest of the future. A people who while at an incipient stage of political and social development, have been able to produce such men, cannot fail to exercise a deep and lasting influence not only on European civilisation, but on the progress of humanity collectively. As barbarians they carved their names indelibly on the pages of history, which they will doubtless hereafter fill with the records of their united action and their disciplined power.

It has been said that what we now see in this Franco-Prussian war is the contest for European supremacy between the Teutons and Celts in their two especially representative nations; but if so, this contest did not commence yesterday. The border wars on the Rhineland were in full activity in the time of Cæsar, and but for the presence of the Romans it is very obvious that the Germans would have entered Gaul *en masse* long prior to what history narrates as the great Gothic invasion of the empire. That invasion of the political followed at the distance of a millennium by its counterpart and continuation, the Protestant invasion of the Papal empire, are adequate evidence of the

weight and importance of the Teutonic element in the racial balance of European power, and are also demonstrative of the fact that that importance is not a thing of yesterday. From the remarks already made in the present paper, and from the general tenor of my other articles, it will be readily understood that I regard this occasional supremacy of the Teutons as more immediately a result of the exhaustion and collapse of the more nervous classic and Celtic races on their southern and western border; these more nervous races being the true leaders, and pre-eminently the intellectual representatives of Europe. Now the truth or fallacy of this idea is not, like some other rather recondite race questions, a matter for the discussion and amusement only of Anthropologists, for on its decision depend our interpretation of the past, and our legitimate anticipations as to the future history of Europe. Let us then glance for a moment at this department of the subject.

Of the bipolar arrangement attaching to many, if not all the well-marked racial divisions of mankind, we have already spoken; and we have also glanced at the principle of the cycle and the epicycle. Now, if we would rightly interpret the deeper meaning of this Franco-Prussian war, our investigations must be guided by both these important principles, for each comes into play in the inquiry such considerations involve. And in the first place let us ask, is it possible for the muscular correlates of a nervous type to effectually discharge the higher intellectual mission of the latter during their period of collapse? This, translated into the special terms applicable to present and passing events, means: Can the Teutons, and more especially the Germanic division of this great race, assume the true political, social, literary, æsthetic, and scientific leadership of Europe, and through it of all modern civilisation, during the possibly impending collapse of France? Judging by the teachings of history we should say decidedly not. Neither in Asia nor in Europe has such a transference of function been effected. The only possible substitute for one nervous race is another. The imperial centre of civilisation in its stupendous march from the Euphrates to the Seine has never diverged into Tartary on the one hand, or Mauritania on the other. Neither at the collapse of classic civilisation did it take flight to the Elbe or the Danube. It simply subsided until enabled to rise again, if not on its old site, then at least on its former line, that is, in northern Italy and France. Thus contemplated, the probability is that Germany, however victorious in the field, will not be able to assume the mission of France, and lead Europe through all her manifold phases of advancing culture to her ulterior destiny.

We are fully aware that other than merely racial considerations should enter into the attempted solution of problems involving such multiform data, and such stupendous issues as those we are now discussing, and to some of these we will now succinctly allude. In the first place Germany has not quite outgrown her age of feudalism. Her unification is only now in process, and she has no capital like Paris or London to represent and reproduce the Romes and Babylons of antiquity. Such a country, then, is not yet politically qualified for exercising the important function of European centrality. She cannot truly lead the nations of western Europe, because in her own internal political life she yet follows, *longo intervallo*, in their wake. The utmost, then, of which Germany is capable in this direction, is military supremacy; and of this she was largely in possession during all the earlier ages of the old Germanic empire, indeed till the death of Charles V.

And here a great anthropological question is presented for our consideration, namely, is not this very political condition an effect, and in a certain sense, a reflection of the vast and gigantic, but as yet imperfectly matured, German mind? To answer this question, let us ask what have the Germans done? And we reply, they destroyed the political empire of ancient Rome, but *virtually* they could not erect another in its place. So they shook the Papal Church, but no one will affirm that their conflicting and sectarian Protestantism represents another. And it is the same in literature; they criticise and annotate, but they do not *create*, except in music, perhaps, as we have said, the mighty promise of their great hereafter. This summed up in other words, implies that the German mind is analytic and not synthetic in its profounder constitution. Hence it can pull down but it cannot build up, or if so, only with enormous labour, as in the achievement of something for which it is imperfectly qualified. No wonder, then, that such a people were slow in effecting their political unification. Nor must we be astonished that they have as yet assumed no true leadership in manners, taste, literature, or science. The truth is that morally, as well as physically, they are supplementary to the more matured though less massive peoples of the south and west. As they conquer and ethnically baptise the more susceptible types at their recurrent periods of racial exhaustion, so in matters ecclesiastic and literary, they come to the front when the more creative peoples are in a condition of intellectual collapse.

We are now, then, in a position to define the mental and military phenomena manifested by modern Germany. Her intellectual activity, and consequently her European influence at the period of the Reformation, were due to the exhaustion of

the Papal Church after an unchallenged reign of a thousand years. So her sudden display of energy and ability in philosophy and letters, at the close of the last and beginning of the present century, must be ascribed to the approaching collapse of the French mind in the same departments. Just as her military triumphs at the present moment may be attributed to the fact that the advancing effeteness of France, after having pervaded her higher intellectual circles, has at last penetrated to her civil and military administration; in both, but more especially in the latter, of which she was once acknowledged supreme.

And now, granting the general truthfulness of the foregoing hypothesis, it may perhaps be asked, what is to be the result of this subsidence of a leading Celtic people, and the consequent military triumph of their Teutonic invaders? And we reply, the transference of European leadership to another Celtic people, lying one stage farther on in the north-western line of empire. This, of course, means the assumption by Britain of such portions of the mission of France as the latter may be compelled to surrender. And thus we are brought to the application of that law of cycle and epicycle to which we have already alluded. If France and Britain reproduce and represent on a Celtic area the Greece and Rome of history on a Classic area, then we may know somewhat of the real nature and ultimate extent of the phenomenon of national collapse with which we are cotemporary. We are not witnessing the subsidence of the entire Celtic race, but only, as we have said, a partial transference of the mission of one of its nations to another, equivalent in character and effect to the subsidence of Greece and the rise of Rome. Now Greece, during the entire period of classic supremacy, never lost either her literary or artistic mission. The latter more especially remained her inalienable possession, so that Rome at the maximum of her imperial greatness, not only sent her chosen sons to Athens for the completion of their culture, but she also invited artists from Greece both for the erection and the decoration of her superior edifices. Judging, then, by the prior event, France will still retain her leadership in manners, fashion and taste; and Paris will still remain the capital of politeness and courtly civilisation. We are perhaps justified in saying that the mission of Britain does not embrace these things, whether we regard the character of her people and her antecedents, or the destiny and function of her imperial predecessor. Not that we would be understood as demanding that the epicycle should, in all respects and in the minutest details, reproduce the cycle. This were unwise, and would show in its results that it was the mere

pedantry of philosophy. The true mission of Britain thus far has been political, colonial, commercial, and industrial. She has set the great example of representative government in combination with a constitutional monarchy and an hereditary aristocracy. Her advance in liberty has been through a process of healthy growth, and by the normal development of her native institutions. She prefers reform to revolution, and has thus set an example which Germany, Italy, and even Austria, have been but too happy to follow. Her colonies far exceed in area the entire extent of the Roman empire, and such has been their increase in population and resources, that she has not been inaptly called the Mother of Nations. Of one great republic, the foremost in the world, she can at least boast the maternity. Nor is it a small thing to say, that eighty millions of civilised men now use her language as their native tongue. Nor do we exaggerate in affirming that ere the close of the present century, more than one hundred millions of English-speaking people will be found occupying some of the most fertile countries and most favourable commercial positions on the globe. London is already the exchange of the world, and the true metropolis of commercial civilisation. In wealth, population, resources, and influence she is already imperial, and may be said from her very magnitude to imply the promise of a stupendous futurity. Of Britain it may be truly said that her merchants are as princes, and we may add, that her captains of industry are as kings.

If, then, France is losing a certain portion of her centrality, what country in Europe is so fitted for assuming it as Britain? Nay, we may go yet further, and affirm that she has already entered upon some of her imperial functions. Those familiar with my writings will know that I expect yet others to devolve upon her. Regarding England as the geographical terminus of the north-western march of civilisation, I anticipate its culmination on this island, and with this the summation and reproduction of all past imperial missions known to us throughout the historic period. I cannot of course expect others to go with me thus far, and am therefore quite willing that this should be regarded as an individual crotchet. Let it indeed be distinctly understood that throughout the foregoing paper I have aimed, not to dogmatise, but simply to suggest matter for the thoughtful consideration of our members, and of Anthropologists in foreign countries. In attempting this I may have fallen into grave errors, which, however, are of less consequence, as before such critics the chaff will soon be winnowed from the wheat, of which if only a few grains remain, my labour will not have been wholly in vain.

DISCUSSION.

Mr. LEWIS said that there were some points in Mr. Jackson's paper on which he should be glad to hear some further evidence, as, for instance, the suggestion that racial characteristics were formed by the area in which they were found. Mr. Jackson had also spoken of a baptism of races by intermixture, but he himself had been unable to find that races did really permanently mix; and even Mr. Jackson, in his paper, spoke of the modern French as being the same as the ancient Gauls, and of the Frankish element as entirely absorbed; or, as he himself would prefer to express it, entirely eliminated. Most authorities agreed that modern civilisation was the descendant of the old Roman civilisation, which was preserved by the Roman and Celtic inhabitants of the cities as opposed to the Teutonic invaders who mostly settled in the country, and who certainly could never have introduced to the former inhabitants a civilisation which they themselves did not possess. The permanence of the Teutonic conquests he attributed partly to the ungenerous spirit in which the Teutons exacted the utmost gain possible out of any advantage they obtained; and partly to their greater fecundity, which might be considered by Mr. Jackson as a proof of racial effeteness on the part of the Celts; but, as regarded the French, was attributed by the Registrar-General to the latter marrying at a later age than the Germans.

Dr. CARTER BLAKE felt compelled to dissent from many of the initial facts on which Mr. Jackson's conclusions were based. Firstly, could it be said that the French were physically inferior to the proportions they presented some time ago? M. Paul Broca had entirely answered that allegation by elaborate tables and maps, which the speaker produced. These showed that not the slightest diminution had taken place in the stature of the French army. Secondly, Mr. Jackson spoke of the "baptism of bone and muscle" by the Franks. But how were we to be sure that the Franks and the Gauls were not both of them Celts? The Franks had been alleged to be light-haired, but such a statement really rested only on the authority of the novelist, M. Eugene Sue, in his *Mystères du Peuple*, and not on sound anthropological induction. He thought it probable that the Celtic area in classical times extended far east of the Rhine. Thirdly, Mr. Jackson spoke of the French as "the last Latin nation"; the pith of his earlier observations, however, was to prove the French Celts; and they could not be Celts and Romano-Latins in the same breath. Fourthly, had the pure Celts deteriorated in bravery? The answer was that the Bretons in the Garde Mobile, and especially the Breton sailors under Breton admirals on land, and under General Chanzy, had fought long and manfully against superior numbers of well-disciplined troops. Fifthly, had the pure Celts deteriorated in intellect? We had only to look at the French school of anatomy and of anthropology, admittedly the greatest in the whole world. The Germans might be superior as physiologists, nor would he attempt to detract from individually great German reputations; but French and Slavonic minds have produced all the great anatomical discoveries of the present century. Sixthly,

he utterly failed to see the parallel between the state of Greece under Pericles, and of Rome under Augustus, with that of modern France.

Mr. W. C. DENDY, while expressing his admiration of the learning and deep research displayed in the paper of Mr. Jackson, regretted that its voluminous discursiveness rendered it so difficult of discussion. From the various ideas regarding the racial elements and the varieties of character arising from miscegenation, etc., ethnology was often extremely puzzling. He believed, for instance, that the musical glory of Germany was much indebted even to Hebrew associations, and was not the result of pure Teutonic genius. In referring to the war between the Teuton and the Kelt as an ethnic question, it was clear that the racial element must not be deemed paramount in explanation of its one-sided conclusion. The Kelt displayed quite as much heroism and power of endurance as the Teuton. The secret of success in the engagement is also often dependent less on the high quality of the forces than on the pre-eminent skill and strategy of their leader; so essential is it to have the right man in the right place for the insurance of victory. The two Napoleons commanded armies of the same racial elements, the first with a more copious sprinkling of conscripts or raw recruits; but the consummate genius of the uncle was the diametric contrast to the shallow tactics of the nephew, as displayed in the passage of the Alps, the almost superhuman prowess at the bridge of Arcola, and the redeeming of the lost battle at Marengo. The result of these conflicts, also, often hinges on the prestige of the *first success*, and we may even believe that, had the battles of Weissenburg and Forbach been won by the French, the progressive fortunes of the war, and the ultimate triumph would have been on the side of the Kelt and not of the Teuton.

Mr. LUKE BURKE, though not prepared to take so gloomy a view of the future of France as Mr. Jackson's paper had set before them, could not but confess that events seemed rapidly tending to justify Mr. Jackson's conclusions. He would be glad to believe that in the event of the collapse of France her unfulfilled mission would be taken up by England; but if so, England would have to cast off her present parliamentary rulers and their one-sided theories of peace and non-resistance, and take more rational views of the condition of humanity in the present era of the world. While acknowledging the general accuracy of Mr. Jackson's comparative estimate of French and German intellect, he could not subscribe to the importance so generally attached to the metaphysical tendencies and writings of Germany. On the contrary, these appeared to him to indicate attributes the very reverse of those which should distinguish clear and powerful thought.

Mr. G. HARRIS said that there were two points connected with the discussion to which he desired briefly to advert. In the first place, he thought that sufficient allowance had not been made for the extensive changes which, wholly independent of race, take place in the character of nations in the course of their career. This was particularly seen in the case of both the Prussians and the French, as they each appeared during the late war, and in those under the first Napoleon. The French

soldiers had undergone an essential change in all their most important characteristics, in point of subordination, of devotion to their officers, of discipline, of endurance, in all that contributed to form efficient soldiers. It had been remarked by one speaker that this could be accounted for by the conscriptions under the first Napoleon, which had emasculated the French nation. But the Prussians had suffered from the wars which were then carried on proportionately with the French. For instance, in the Russian expedition, Napoleon took with him thirty-two thousand five hundred Prussians, most of whom were lost; and thirty-eight thousand Prussians fell at Ligny and Waterloo. The real fact is, that the characters of nations are extensively changed by various influences, as may be seen in the case of Italy, and Greece, and Spain. The other conclusion which he drew from the present discussion was, that education was more powerful in its influence than was race. Prussia had been educated, and was prepared for the late encounter, while the military education of France had been wholly neglected, and both the people and the soldiery had become enervated by luxury.

On the motion of Mr. J. KAINES, seconded by Captain BEDFORD PIM, the discussion was then adjourned until March 20th.

MARCH 20TH, 1871.

SIR JOHN LUBBOCK, Bart., M.P., F.R.S., *President, in the Chair.*

THE minutes of the last meeting were read and confirmed.

The following new members were announced: JOHN EDWARD BREARY, Esq., Madras; and WILLIAM SLOAN, Esq., Luz, Madras.

The following presents were announced, and the thanks of the meeting voted to the respective donors:—

FOR THE LIBRARY.

From Dr. J. BARNARD DAVIS, F.R.S.—Honduras; Descriptive, Historical, and Statistical. By the Hon. E. G. Squier, M.A.

From Dr. R. KING.—The Marx Dictionary, vol. xiii; and Letters to a Candid Enquirer on Animal Magnetism. By Dr. William Gregory.

From the SOCIETY.—Proceedings of the Royal Society, No. 126.

From the SOCIETY.—Journal of the Asiatic Society of Bengal, part ii, No. 4.

From the EDITOR.—Nature, to date.

The Discussion on Mr. J. W. Jackson's paper, "The Racial Aspects of the Franco-Prussian War", was resumed by

Mr. J. KAINES, who asked what signs have French Celts given that they are "a decaying nervous race", needing "ethnic baptism" at the hands of the "osseous and muscular Teutons", or Germans—in what department of human thought or effort? He then touched cursorily (and very briefly) on the causes of Prussia's recent successes on the battle-field—her iron discipline, whereby her hordes were wrought into so many merely animated machines. He showed that the French were outnumbered and overwhelmed up to Sedan; and afterwards France had mainly raw levies and volunteer soldiers, who had never smelt powder, to depend upon; and these could not cope with the disciplined warriors of Germany. Mr. Kaines objected to the phrase so frequently to be found in Mr. Jackson's writings—namely, "ethnic baptisms"; and suggested that "ethnic extreme unctions" would be a better phrase. "Ethnic baptisms" was a new name for brute force, against which all civilisation protests. All laws, religions, and politics, are framed to suppress, if not extinguish it. To the statement, that modern "French literature was deficient in depth", while German literature was characterised by it, Mr. Kaines replied that Mr. Jackson had mistaken lucidity and logical order for superficiality—qualities certainly not possessed by Germans, who mistook cloudiness and mysticism for depth, and general unintelligibility for profundity. Their depth, indeed, passed all understanding: Hegel and Richter were quoted as instances of this. German philosophy was subjective mainly, and dealt with what had no existence outside the brains of the thinkers; while French philosophy was mainly objective, and dealt with things which are: hence the difference between German and French philosophers and *savans*. German works on philosophy were written by philosophers for philosophers. German *savans* were deficient in the faculty of generalisation—Oken, for instance. Max Müller admitted that the Germans were uninventive. Until the time of Goethe and Schiller, they had no poetry worthy of the name—nothing but imitations, mostly bad ones, from the French. Menzel, in his review of German literature, speaks scornfully of this. The German drama, when not romantic—i.e., unreal—was maudlin: Kotzebue's plays were instances of this. German fine art was homely, photographic in detail, and deficient in breadth and ideality. German histories, in the opinion of Carlyle (no mean judge), were Dryasdust collections of facts, as uninteresting as a post-office directory, without its order and lucidity.

In answer to the statement of Mr. Jackson, that there had been "a dearth of French master-minds during a generation", Mr. Kaines quoted, at random, the names of the following illustrious persons. *Science*.—Comte, Broca, Boucher de Perthes, Arago, Broussais, De Blainville, Geoffrey St. Hilaire, Quatrefages, St. Claire de Ville, Pruner Bey, Bichat, Berthollet, Pouchet, De Candolle, and Biot. *History*. Guizot, Thierry, Michelet, Mignet, Carrel, Taine, Louis Blanc, Janin, Bonnechose, Martin, and Villemain. *General Literature*.—Cousin, Royer-Collard, Jouffroy, Chateaubriand, Mignet, Littré, Lamartine, Victor Hugo, Beranger, Alfred de Musset, and others. Mr. Kaines asked what a nation (or race), producing such men, gained by "ethnic

baptism" with Germans (or Teutons)? Had not French Celts everything to lose by it; the Germans everything to gain?

Mr. Jackson had made the statement that "the Reformation was a Teutonic movement." The "insurrection of the human mind against absolute power in the intellectual order," as Guizot finely called it, was contemporaneous in France (Celtic), England (Mr. Jackson says Celtic also) Germany and the United Provinces (both Teutonic). In England, France, and Holland the Reformation worked out a political as well as religious freedom—not so in Germany. Germany lacks political freedom this day, as the imprisonment of Gervinus, for writing, not a political pamphlet, but a grave history of his own country from other than the point of view of the military junkerdom which rules Germany—bears witness. In the addresses recently presented to the new Emperor of Germany the word "liberty" occurs painfully often—a thing even Germans begin to be in need of. The Germans are not only incapable, as Mr. Jackson admits, of heading the modern social movement, but they are in the rearguard of civilisation. Their "osseousness and muscularity," in which Mr. Jackson so delights, proves them to be a backward people, needing "ethnic baptism" at the hands of a more civilised race.

Mr. BENDIR observed that Dr. Blake had declined to accept Mr. Jackson's conclusion as to the ethnic exhaustion of the French Celts of to-day, because Professor Broca had collected statistics intended to prove that Frenchmen had not deteriorated in their *physique*. Two facts appeared to upset the lesson drawn from Broca's figures. The standard of height in the French army had been lowered three times in sixty years, and the population of France was not increasing of late so fast as it used to do. These facts lent some support, he thought, to Mr. Jackson's statement. Dr. Blake had called attention to the eminence of the French as anthropologists and anatomists, whilst he considered the German school of physiologists as the superior one. Difficult as it would be to connect this opinion with the racial aspects of the war, there was but little foundation for it; the science of anthropology having sprung up in Germany and flourished there ever since: the literature on that subject was fully equal in value to French anthropological literature, and the publications of the late Anthropological Society of London proved it. That learned body had issued translations of six standard works bearing on the Science of Man,—of which three were by Germans, two by Frenchmen, and one by an Italian. In anatomy also the Germans held their ground. Dr. Blake had testified to the accuracy of Spurzheim's observations on the anatomy of the brain; Owen's high opinion of Oken as a teacher of and discoverer in comparative anatomy would perhaps carry some weight; Carl Ernst von Baer, more illustrious even than Oken, was hardly ever alluded to by men like Huxley and Darwin without some epithet of commendation. But in microscopical anatomy, which now most particularly engaged the attention of all earnest students of that science, the leaders were all Germans; and the names of Virchow, Kölliker, and a host of others would be a sufficient answer to Dr. Blake, who was so thoroughly competent

to appreciate their labours. Science was, in fact, the common heritage of all civilised nations ; and for the last hundred years the French, the Germans, and the English had cultivated it with equal success. If the French were more brilliant, the Germans were more profound, and no doubt would remain so in spite of the strictures of Mr. Luke Burke.

Dr. CHARNOCK said Mr. Jackson stated that the Keltic nations of the nervous stock are effete. But which of the Keltic nations were, and which were not, of the nervous stock ? He (Dr. Charnock) looked upon the Gaels, Irish, Welsh, and Bretons to be all of the nervous stock. The author of the paper stated that the French have acquired their superiority up to the present time through a muscular baptism with the Franks ; and they must now have another baptism with German blood. No doubt at the time of Tacitus and Cæsar the Galli were a rude nation ; but so were the Germani. Both nations were pagans : Mercury was the chief god of the Germans, and did they not worship him still ? According to Gibbon, the Galli, at the epoch of the Frankish anabasis, were a polished nation ; and what did Gibbon say of the Franks ? They were barbarians, were of inconsistent spirit, and noted for their disregard of the most solemn treaties, and for their thirst of rapine. And what was the proper estimate of the French at the present day ? He (Dr. Charnock) said, and did so advisedly, that notwithstanding all that had lately happened, the French were the most refined, the most civilised, and the most intelligent people of Europe. Mr. Jackson said the English people are of Keltic origin. It was time that such a heresy was put an end to. None of the reasons that had been adduced by authors to prove this fact were of any weight. No doubt both the English and the Welsh were for the most part dolichocephalic, but Dr. Barnard Davis, who had examined skulls both of the ancient Saxons and the Galli, proved that sixteen out of the nineteen of the former were dolichocephalic, and that four out of six of the latter were brachycephalic. Instead of re-baptising the French, it would be better to baptise the Germans.

Col. A. LANE FOX said he would confine his remarks to the subject of the paper ; viz., the Racial Aspects of the War. Nations, like individuals, may be great in literature and the arts ; but, if deficient in warlike qualities, are liable to succumb to others less refined, but more powerful, than themselves : and the main question for consideration in the paper, he thought, was, whether the results of the recent campaign were attributable to racial qualities, or to other causes. As a military man, he dissented from those who had expressed the opinion that racial characteristics had nothing to do with victory. All history showed that the two nations in question possessed special qualities which adapted them differently to the purposes of war. He took the liberty of quoting from Dr. Robert Jackson's work, *On the Formation, Discipline, and Economy of Armies*, which was written towards the close of the last century. Dr. Jackson describes the military character of European nations ; and his opinion is valuable, not only as an ethnologist, but on account of his practical experience as an army-

surgeon in the field. He speaks of the qualities of the French soldier much in the same terms as those of the Gaul were described by Caesar; viz., impetuosity in the onset, want of consistency and perseverance in conflict, and ready recoil after discomfiture. Though of comparatively low stature, and of inferior brute force generally, he speaks of them as active and elastic: "Being well placed on their limbs, and well poised at the haunches, they move with ease and freedom, and sustain long marches with facility.... Not so firm to resist as many, and not so powerful in attack at close quarters, they are constitutionally impetuous, and susceptible of an enthusiasm which, striking by flashes, achieves great things where it is well directed." On the other hand, he describes the Teutonic races as remarkable for coolness and endurance. They meet their enemy deliberately, and preserve an unruffled temper, even in combat. Dr. Jackson speaks of the French as being uncertain in their fire; whilst the Teutonic races, and especially the English, have at all times excelled in missile force. It is remarkable that this quality still adheres to the two races, although the French pay more attention, perhaps, to the training of their men in firing than any other nation. He (Col. Fox) had but little experience, but he had had an opportunity of comparing the English and French in the field; and his own observations led him to concur entirely in the remarks of the able author whom he had quoted. He had heard French officers describe the warlike qualities of the two races in nearly the same terms; and he mentioned one or two instances in which, by the accounts he had received, the same qualities appeared to have been evinced during the recent campaign. Whilst, however, concurring with the author of the paper as to the influence of race, he did not attribute the results of the campaign entirely, or even mainly, to this cause, but rather to the corruption of the French army under the Imperial system, and to the incompetence of the commanders during the early part of the war. Neither did he believe it could be regarded as a war of races. Too much, he thought, had been done by the press to conceal the fact that it arose out of the ambition of princes, from the mischievous abuse of power in the hands of a few; and that the mass of the people of the two countries neither desired the war nor were responsible for the evils which it had caused.

The following gentlemen also took part in the discussion on this paper: Dr. King, Dr. Collier, Mr. Chinnery, Mr. Prideaux, Captain Bedford Pim, and the President.

Mr. JACKSON said he hoped he should be allowed rather more than the allotted time of ten minutes to answer so many objections. As there were distinct areas for the fauna and flora of the earth, we might be quite sure! there were equally distinct areas for its human types. Hence the utter disappearance of the classic colonists of Northern Africa and the successive conquerors of Egypt. Hence, also, the gradual disappearance of the Turks from Europe, and, we may add, of the Gothic nobility from Italy, France, and Spain. The Teutons did not bring civilisation, but bone and muscle. Whether the Franks,

strictly speaking, were Teutons or not, was of small importance; Gaul was being gradually colonised from the north by a succession of Teutonic invaders for many centuries. The process was in full activity in the days of Caesar, and Roman conquest only arrested the onward march of the invaders for a season, when it was resumed with more force than ever, and ultimately submerged the mistress of the world, as well as her provincials. France may still be a good school of anatomy; but her men of science no longer hold the commanding position they did in the days of D'Alembert, La Place, and Cuvier. Neither do her literary men influence the mind of Europe as they did in the days of Voltaire. France had not one right man in the right place, because her master-minds have disappeared. The Germans have genius, and that, too, of a grand and massive order; but their mental constitution is not adequately unitary and synthetic for exercising the exalted function of imperial centrality. The nervous susceptibility of a people is increased by civilisation, as is that of an individual by intellectual culture. But we must not despise bone and muscle, or hold a vigorous appetite in contempt. As the world is constituted, these are desirable even for an individual, and they are absolutely necessary to a people who would hold their own for successive centuries in the great arena of war and politics, where communities struggle for existence in the death-grapple of national rivalry, and where ultimately the weak succumb and the strong make good their position. It is rather a strange opinion that the Germans are not industrial. They were highly valued as workmen in France, and are regarded as among the best colonists that go to America. If the Reformation were not a Teutonic movement, then history is fallacious and geography is unreliable. Colonisation is the modern form of racial migration. Ethnic baptisms are as necessary now as of old. They are a part of the collective life of humanity. No doubt, dynastic ambition and diplomatic intrigues have had their share in bringing on this war; but it does not follow from this that it is not fundamentally and essentially racial in character and origin. Sovereigns and statesmen are not the masters, but the servants, of that power, which sternly concatenates "the logic of events". They may provide occasions, but they do not put true causes in motion; these are due to forces beyond their control. Alaric, no doubt, led the Goths to Rome, but he did so only in the sense of heading an inundation, whose well-springs and contributory streams were in full flow centuries before his birth. King William and the Emperor Napoleon, Bismarck and Moltke, were merely agents in this matter, for the transaction of an event as inevitable as the snowstorms of the coming winter, or the darkness of an approaching eclipse. It is to this level we must rise if we would contemplate the history of the past, or the political evolutions of the present, from a true anthropological standpoint. Our political prepossessions, and even our social preferences, must be cast aside as of no account in the scales of science, which depend in perfect equipoise from the golden balance of unalterable truth. I do not love France or admire the French less than some of their warmest advocates to-night. Have I not said they

are the Greeks of the Celtic area? Can I say more? But did it not happen to the Greeks that they culminated and declined, as is the destiny, sooner or later, of all the time-born? But, remember, Greece did not sink into barbarism till after the fall of Rome. She could not, for she had her own place, and with it her inalienable rights and prerogatives, implying her duties, in the classic scheme of civilisation. So France will never do more than veil a portion of her glory, while Britain, as the future representative of Celtic power and culture, comes to the front. We have also heard much abuse of the Germans, and my paper has been spoken of as pro-Prussian. There cannot be a greater mistake. I am not blind to the solid worth, the substantial virtues, the profound attainments, and the splendid organisation, civil and military, of our German cousins. But have I not said that, ethnically and geographically, they lie outside the line of empire, and that, consequently, although they have conquered, and may hereafter reconquer, unhappy France, they cannot supersede her? Have their greatest opponents to-night said more than this? But enough; as anthropologists we have but one aim, the truth as it is in nature, and to the attainment of this, let us hope that your observations, if not my paper, have in some measure contributed.

The following Paper was then read by the author:

III.—*On the PREHISTORIC and PROTOHISTORIC RELATIONS of the POPULATIONS of ASIA and EUROPE, in Reference to PALÆO-ASIATIC, CAUCASO-TIBETAN, PALÆO-GEORGIAN, etc.* By HYDE CLARKE, Esq.

[*Partial Abstract.*]

The question proposed for examination was the ancient extension of the Georgian (Georgian, Swan, Lazian, etc.) and other populations of the Caucasus. The evidence adopted was the ancient names of rivers, mountains, towns, and countries, in the classic geographies. Several hundred of these names were derived from Georgian words for "water" and "river", as *Mdinare*, Georgian; *Pshani*, Georgian; *Oruba*, Lazian; *Veets*, Swan (*Bedu*, Phrygian); *Gangalitz* (*Gangir*), Swan; *Tsqari*, Mingrelian. The mountain names, and those of some towns and countries, were derived from *Baal*, *Moloch*, and other "fire" roots. This language was classed as Palæo-Georgian, and a form of the Palæo-Asiatic, or General language, from which the Semitic, Aryan, Tibetan, Chinese, and other leading families of language, branched off. The structure of the language was illustrated.

The area in which these words were used was India, and India beyond the Ganges, Ceylon, Persia, Media, Bactriana, Arabia, Mesopotamia, Syria, Palestine, Asia Minor, the Caucasus, the countries of the Danube, Greece, Italy, Spain, Gaul, Britain, Ire-

land, and all North Africa except Egypt. This district is also that of the megalithic monuments.

This evidence of one uniform language having been adopted over so wide an area was taken as a proof of one dominant race having held empire.

Attention was called to the circumstances of the Khasias, who now build megalithic monuments, being mixed up with those tribes in the Himalayan regions, which now speak languages allied to those of the Caucasus.

The leading race spoke the Palæogeorgian language. This race is now represented by Caucasians of high physical type, speaking the Georgian languages, closely allied with the ancient language. These Georgians, and the neighbouring Circassians, have the reputation of being a handsome race, as were the Iberians of old.

Tracing the history by the best materials we can, the beginning would be a vast horde of tribes, like the invasion of Genghis or Tamerlane, under Caucasian leadership. These hordes founded an empire in India, one in Persia and Media, if not in its origin the same as the Indian empire. Of this Median empire, a chief seat must have been in Iberia, the Paradise of the Mosaic record. It was, however, in Nineveh and Babylon that its schools of written and other learning and of arts were formed. It is to Palæogeorgian sources we must look for the earliest forms of cuneiform, and for the decyphering of Akkad.

A southern invasion, like those made in after times, carried the hordes into Syria and through Egypt, and so into Lybia and Mauritania. From Egypt they were driven out; but they gave, in their own nomenclature, the earliest notions of Aiguptos, Aithiopia, Nubia, Thebai, etc., to the western nations. In Palestine they constituted the many tribes of the Canaanites.

The Mosaic records chiefly obtained from Palæogeorgian, and not, as supposed, from Chaldaean sources, give us most ancient materials. In Paradise we have a Caucaso-Tibetan nomenclature and district—Havilah, the land of gold (well conjectured to be Kolkhis), with its river Pison, or Pishon (the Phasis); Cush (which must have been Iberia), with its river Gihon (the Cyrus or Araxes); Assyria, with its river Hiddekel, undoubtedly the Tigris, and the fourth river Euphrates. The name of Evah suggests, as does the whole narration of the temptation, linguistic affinities. The contest of Cain and Abel, with the genealogy of Cain and Enoch, and the names of Tubal Cain, Lamech, etc., may have afforded the suggestion of a contest between the worshippers of fire and water, Baal and Ganga (Phallus and Yona). In the Tholedoth, or Book of Generations, in Genesis, there has been continued confusion from the Septua-

giant having assumed that Cush there meant Aithiopia. Thus, Ham, being made to represent a black race, also embraces in his family many high races. Japheth has been held to be the father of the Indo-Europeans or Aryans, when at such epoch no Aryans had descended to those regions.

Taking, however, Shem to represent the Semitic race, then Ham will be found to include in his tribes the Caucaso-Tibetans of Palestine, and of the regions then known. Japheth most possibly represented the Hispano-Iberians, about that epoch splitting off in a migration from some Dravidian centre in India, leading on Dravidian mercenaries and followers.

By taking Cush, the first son of Ham, to represent, not Ethiopia, but the country next to Havilah, or Kholkhis and Assyria—that is, Iberia—we get a concordance in the Tholedoth; for we have Havilah again next to Cush, and in the neighbourhood Raamah (most likely Armenia), and Nimrod, the founder of Babel. It is in accordance to find them allied with other Caucaso-Tibetans in the tribes of the Canaanites.

Mizraim and the Philistine may have appeared more properly referable politically to the group of Ham, than to those of Japheth or Shem; for the scheme is more probably rather that of political geography than of ethnology.

The period of the entry of the Caucaso-Semitic Israelites into Canaan gives us a chronological point in the history which will be 3300 or 3400 years; but the Caucaso-Tibetans had earlier entered Palestine, and had also built up an empire in Babel. The epoch can, therefore, be safely carried back to 4000 years, and for the beginning of the Indian invasion, perhaps, to 4500 or 5000 years.

Palestine was peopled with high and low races, addicted to superstitions, more or less licentious and barbarous. Upon them fell the Israelite invaders, as other Semitic tribes did on Syria and Mesopotamia. The Canaanites were gradually subdued; but their superstitions infected the invaders, and from time to time marriages were made by these with the fairest of the daughters of the Canaanites. In this way, and, perhaps, on the supposition of sub-Semitic tribes being led from Egypt by Caucasian leaders, we may account ethnologically for finding side by side, among the Jews, types so opposed as those approaching the African and those fair forms of earth's most beautiful daughters. Here there is a beauty whom Georgia and Circassia cannot surpass; there the thick lip and frizzly hair of North Africa. Thus Nature records, in generation after generation, the events of ethnological history in the long past.

The Caucaso-Tibetan, or middle empire of Mesopotamia, fell before the Semites, and afterwards became the prey of the

Medes and Persians. Here fire-worship in a milder form still held sway; here the cuneiform letters kept their own against the Phœnician; and the Akkad learning and arts were transmitted through the Assyrian to the Persian.

Part of the remnant of the receding race was driven among their free kinsmen in the Caucasus to take part in after times in the invasions of the Scythians, and in the kingdoms of Parthia and of Pontus.

Part of the conquered population remained under the Assyrian yoke: the main body of these are the Armenians and the Persians, who afterwards succumbed to the Aryan invasion, and adopted the Aryan languages, as they had the Semitic. It is in this way alone that we can solve an ethnological problem, the marked difference between the unquestionable Indo-Europeans, or Aryans of the west, and those of the east, each of discordant ethnological type.

The Persian and the Western European are diverse in every oriental eye; and they are connected by men of science because they speak Indo-European languages and have white skins. So far as the Armenians are concerned, and the Ossetinians, their languages are sufficiently remote from the main Indo-European stocks to have caused doubts as to their classification. The Georgians and Circassians, we now know, do not speak Indo-European languages with Indo-European grammar; and there are greater points of physical resemblance between them and the Armenians and the Persians than with the Western Europeans.

The fair solution is, that the Georgians, the Circassians, the Armenians, the Persians, the Koords, the Beloochs, and the Greeks of Asia Minor and Scio, do not belong to the Indo-European, but to another high race, preceding the Indo-European or Aryan, and for which another name must be found. *Caucaso-Asiatic* will do for the time. Many of the tribes of Caucasus may ultimately be assigned to a lower stock.

The phenomenon above described is analogous to that which we find in the case of the Hispano-Iberians and others. It is also that which has affected and disturbed the ethnological relations of India, where the Aryans played a high political part, as the Georgian element did in the Caucaso-Tibetan empire, and the Hispano-Iberian in Southern Europe. Ethnologically, the Aryans have a smaller share than the Caucaso-Asiatics in the higher populations of India. They are grafted on a natural Caucaso-Asiatic stock.

After the Semites grasped Mesopotamia, Asia Minor was attacked by the Hispano-Iberians. The Caucaso-Tibetan kingdom was maintained under the Amazons and the Lydians, and

by them were the ancient cities named, if not founded. The Hispano-Iberians were, after as short a reign as that of the Belgæ in Britain, beaten by the Pelasgians and Hellenes, who proceeded to settle on the shores. The Amazons were driven to the north-east shores, back and back, to the refuge-land of Caucasia. The ancient Lydian kingdom was held together till the fall of Croesus. The languages of Phrygia, Lydia, Caria, Lycia, and Thrace, I assign, on the evidence of their remains, to the Palæogeorgian group.

In Hellas we find weaker traces of Caucaso-Tibetans than in some other places, but still undeniable evidence. Traces of the Hispano-Iberians are also weak. True Indo-Europeans, the Hellenes swept over the countries, wasted them, filled them with their people and their language, turned such natives as were saved into slaves, and crushed out the ancient records, destroying the civilisation of ages. To the north of Greece and Italy, the countries to the Danube had been occupied by the Caucaso-Tibetans. Who were the Pelasgians may depend on a better knowledge of the ethnology of the regions north of Hellas. In Italy, the Caucaso-Tibetans must have been better preserved than in Hellas. Their nomenclature is decided. The Latin mythology is grounded on Caucaso-Tibetan bases, modified in later ages by importations from Hellas and the east. The Caucaso-Tibetans had, however, been supplanted by Hispano-Iberians and Ligurians in the north. South, and in Sicily, it is probable migrations from Asia Minor were the continuance of traditional intercourse, and that the so-called Greek colonies were only successive movements in the old tracks from the Tibeto-Caucasian cities of the Asia Minor coast.

The Etruscan problem is another that offers itself to us for consideration under the new light. It has been helplessly tried by the aid of Armenian and Celtic; but it has not before been subjected to the test of Palæogeorgian. The confused statements of Herodotus have driven inquirers from the way; for, though a connection with Lydia has been sought, it has been under feeble guidance. In this early stage, and amid all the confusion, ethnology favours the connection of the Etruscans with the Caucaso-Asiatics, for such the features on the monuments delineate. The style of art, the march of civilisation, help to strengthen the conclusion. Comparative mythology will show that the Etruscans delivered to the Romans much of the Caucaso-Tibetan worship. The names of places show that the country was held by the same population as in Italy; and to find another equivalent population for the Etruscans, having set aside an Hispano-Iberian and an Aryan origin, we can only accept the Caucaso-Tibetan. The language in its scanty materials shows resemblances to the ancient languages.

From all these circumstances, we shall obtain elements to mark out in the Italian population, the Caucaso-Tibetan and some Ligurian in the south, Aryan in the centre, then Caucaso-Tibetan, and further in the north Ligurian or Hispano-Iberian, possibly some Celtic.

In Spain, again, the traces of the Caucaso-Tibetan are feebler, because Spain was subjected to a long Hispano-Iberian domination and to a large Celtic invasion. The great river-names, however, belong to the main group.

Mauritania offers suggestions of intercourse with the Caucaso-Tibetans before the time of the Iberians and Phœnicians.

The great rivers in Gaul, some traces in the river-names of Hibernia and Britannia, the very names of those islands, but more particularly the megalithic monuments, speak of a Caucaso-Tibetan occupation, and to this may be owing some of the high and low types, which distinguish Ireland at present. The invasions to which Gaul and the Britains have been subjected, and particularly those by Hispano-Iberians, Celtæ, and by Germani, sufficiently account for the paucity of remains of anterior races.

For Germania we have nothing but the names of the great rivers, and no testimony as to its relations with the great Tibeto-Caucasian horde.

The general results are these :

The determination of the ancient and modern extension of the Georgian races and languages, and their descent from High Asia, in common with all the great families of men.

Consequently, that of the ancient and modern extension of the Caucaso-Tibetan races generally.

The extension of the Caucaso-Asiatic stock in Western Asia, and its influence as an element in India.

The former influence of the Caucaso-Tibetans in Europe, and the existence of possible traces or reproductions of types in the present day.

The determination of the earliest epochs of civilisation, concurrent with that of Egypt, and representing one period of the Indian system of civilisation.

The connection of the prehistoric and protohistoric periods in Asia and Europe down to 3300 years ago, affording the means of connection and comparison of facts recorded at later dates, illustrative of the oldest written records. There is thus a commentary on the works of Moses, Homer, Hesiod, and Herodotus; an exposition of mythology, folk-lore, and tradition.

The propagation of fire-worship and river-worship, and of tree- and serpent-worship.

The establishment of a basis of reconciliation for the propagation of megalithic monuments, and the constitution of a class

to which some of the rock-cut monuments (the Lydo-Assyrian), gold and bronze ornaments, and other remains, may be more safely assigned.

The determination of an ancient language, the Palæogeorgian, near, in epoch and form, to the anterior language (the Palæo-Asiatic), the grammar of which has affected the philology of the old continent, as exemplified in the remote languages of South Africa, as well as in general philology. The assignment to the Palæogeorgian group of Phrygian, Lydian, Carian, Lycian, Thracian, and Etruscan.

The establishment of the Palæogeorgian, or Akkad records, as deserving of investigation on a special basis.

The proposition of a new solution of the Etruscan question.

An illustration of the relations of the Hispano-Iberian branch of the Dravidians.

The determination of a period of comparative grammar, and, consequently, of human thought, when there were many roots for the same term, and when the root letters were transposable at will, and words were capable of still further multiplication by the addition of prefixes. This period must have been preceded by one still more complicated (such as that of the Australians); but was succeeded by a period in comparative grammar, when the roots were selected, and the root letters were fixed. This was attended by a simplicity and economy of thought, and accompanied by a simpler form of writing—that known as the Phœnician alphabet.

Thus we are able to look up to a still earlier epoch of civilisation, common to High Asia, Egypt, and possibly China, and we can trace also the subsequent partial development of the Chinese and Georgian languages, still partially adhering to the old forms of thought; and, further, the great development of the Semitic and Aryan races, which profited by the new instruments of language. We may, therefore, expect further discoveries as to the Chinese, and an insight into a very remote period of civilisation, possibly beyond 4500 or 5000 years ago. The monosyllabic languages are consequently derived from triliteral roots, and are not a stage towards agglutinative and inflected languages, but synchronous with Semitic.

The illustration of a wide-spread knowledge of geography by one race or political body, at a period more remote than has been suspected, and thereby an earlier basis for the common transmission of the forms of civilisation. So far as the west is concerned, we get distinct evidence of a channel for the distribution of knowledge, folk-lore, and mythology, from a centre in India and High Asia. The next is that of the Hispano-Iberians or Dravidians. By acquaintance with these former epochs, we shall be

able to ascertain the real influence of the Aryans, too often exaggerated, from ignorance of the true relations of other races, and from too ready belief of easy fancies in preference to the research of facts.

DISCUSSION.

Dr. CHARNOCK said that the author of the paper endeavoured to connect river-names in Georgia and Circassia with those in Siam. There was, no doubt, a remarkable resemblance between the names for "water" in Circassian and those in the Tataric languages, as the Turkish, Kalmuc, etc.; and also with those in the Tibetan and Chinese. The Chinese name for water was *shwü*; in Tibetan it was *tsu*; in Kalmuc *usu* or *sui*; in Turkish *sü*; in Circassian *psoo* or *psce*. In the latter language, the name for "river" (*viz., thsee*) was almost identical with the Turkish *ichäi*. On the other hand, there did not appear to be any connection between the Georgian words for "water" and "river", and those either of the languages in question or of the Burmese or Siamese. The Georgian word for "water" was *skäle*, and for "river" *dindre*. The Siamese word for "water" was *näm*, and for "river" there were, among other words, *menäm* (literally, "mother of waters"), *khöng kha*, and *klong*. The words *xölläthara* and *xölläthan* were used both for "water" and "stream". The name *Rhodanus*, set down in the table, was pure Celtic, being derived from *rhyd*, "a course".

Mr. LUKE BURKE presumed that he must have wholly misunderstood Mr. Clarke's statements, clear and simple as they seemed to be; for how was it possible to admit that any nation could have hit upon such an extraordinary mode of expressing its thoughts, as that described by Mr. Clarke, as he (Mr. Burke) understood him? If the single thing "water" or "river" had two or three hundred names, what must have been the character of the entire dictionary of the language! Or how did the babies contrive to pick out the appropriate kind of consonants amid all the disguises resulting from interchanges of position, intermingling of vowels, and the addition of prefixes and terminations?

Mr. HYDE CLARKE said that Mr. Burke had illustrated the cause of the change. Language complicated by priests and men of learning no longer served the common purposes. Hence the reaction.

ORDINARY MEETING, APRIL 3RD, 1871.

SIR JOHN LUBBOCK, Bart., M.P., F.R.S., *President, in the Chair.*

THE Minutes of the last Meeting were read, and confirmed.

The following New Members were announced: ARCHIBALD HAMILTON, Esq., Feegee Islands; and F. W. RUDLER, Esq., F.G.S., Museum of Practical Geology, Jermyn Street, S.W.

The following presents were announced, and the thanks of the meeting voted to the respective donors:—

FOR THE LIBRARY.

From the AUTHOR.—The Book of Nature and the Book of Man, by C. O. Groom-Napier; Tommy Try, by C. O. Groom-Napier; and *Miscellanea Anthropologica*, by C. O. Groom-Napier.

From JAMES BURNS, Esq.—*Human Nature*; a Record of Zooistic Science and Popular Anthropology. 4 vols.

From the SOCIETY.—*Journal of the Society of Arts*, to date.

From the EDITOR.—*Nature*, to date.

The following Report was read:

IV.—REPORT on the RESULTS obtained by the SETTLE CAVE EXPLORATION COMMITTEE out of VICTORIA CAVE in 1870. By W. BOYD DAWKINS, Esq., M.A., F.R.S., F.G.S.

CONTENTS.

1. Introduction.
2. The Romano-Celtic Stratum.
3. Date of Habitation.
4. The Neolithic Horizon.
5. The Grey Clay.
6. Résumé.

§ 1. *Introduction*.—The long grey precipices and plateaux of limestone, which characterise the dales of the West Riding, are worn and fretted into caves of almost every size and form, some being traversed by water; while others, deserted by the streams, have afforded shelter to men and wild animals from the Quaternary period to the present day. The first cave that was ever scientifically explored in the county, the famous hyæna-den of Kirkdale, yielded to Dr. Buckland, in 1819, the materials by which he was led to the proof, that the extinct animals found in Britain had undoubtedly once lived here, and were not borne into their resting-places by a deluge, nor, as was suggested, imported by the Romans for purposes of war or sport. It is not too much to say that this discovery opened up a branch of investigation that has already enabled us to see further into the cloud-land which separates history from geology than we could have hoped for.

In the following report I have given the results of the exploration undertaken by the Settle Cave Committee, by the kind permission of Mr. Stackhouse, the owner of this cave, during the last twelve months. I have not attempted to lay before the Committee the minute details which have been noted each day by Mr. Jackson, the superintendent of the works, by whose care the exact position in the cave of every object of note has been recorded.

The Victoria Cave, near Settle, so called from its discovery on the coronation day of our Queen, stands about half-way up a cliff two hundred feet high. It consists of a series of large chambers and passages, which are now nearly filled to the roof

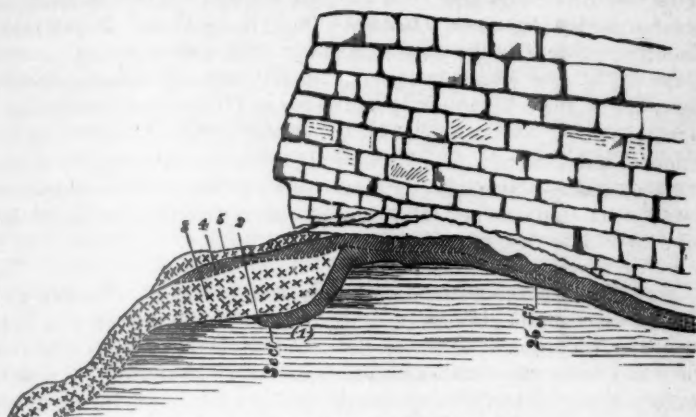


FIG. 1.—Longitudinal Section of Victoria Cave.

with *débris*, and robbed of the massive stalactites with which they were once adorned. It furnished to its enterprising discoverer, Mr. Jackson, from time to time, a remarkable series of ornaments and implements of bronze, iron, and bone, along with

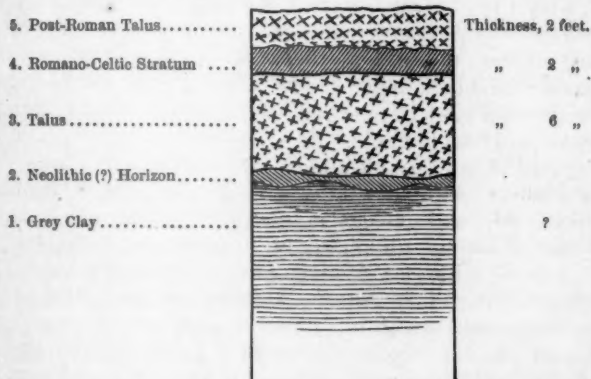


FIG. 2.—Vertical Section at the Entrance to the Victoria Cave.

pottery and broken remains of animals, which have excited considerable attention, and have been figured and described by Mr. Roach Smith and others. Fragments of Samian ware and other Roman pottery, coins of Trajan, Constantine, and Constantius,

proved that the stratum in which they were found was accumulated after the Roman invasion. There were also bronze fibulæ, iron spear-heads, nails, and daggers, bone spoons, spindle-whorls, amber and glass beads, as well as bronze needles, pins, finger-rings, armlets, bracelets, buckles, and studs. The broken bones belong to the Red Deer, Roebuck, Pig, Horse, Celtic Short-Horn, Sheep or Goat, Badger, Fox, and Dog. The whole collection was just of that sort which is very generally found in the neighbourhood of Roman villas and towns, such as Uriconium, which have been sacked; and was doubtless formed while the cave was a place of habitation. As all these things were obtained from the surface, and as the mass of *débris*, that extended to an unknown depth, was undisturbed, the Committee resolved to subject the cave to a thorough examination.

§ 2. *The Romano-Celtic Layer* (No. 4, figs. 1, 2).—Ground was broken on a small plateau (see fig. 1) outside the entrance, which occupied the point where daylight could be seen through chinks in the rocks from the inside of one of the large chambers, and which could not fail to have been chosen by the inhabitants for kindling their fires and cooking their food. On the surface there was a talus, two feet thick, of angular fragments broken away from the cliff above by the action of frost (No. 5, figs. 1, 2). It rested on a dark layer, composed of fragments of bone, more or less burnt, burnt stones, which had formed the fire-places, very many fragments of pottery, and coins of Trajan and Tetricus. Fires had been kindled on the spot, and the broken bones of the animals strewn about were the relics of the feasts. A new entrance into the cave was gradually opened up; and, as the work progressed, the talus died away, and the black layer below rose to the surface, and was continuous with that from which Mr. Jackson had obtained his ornaments and implements. It covered the floor, passing over its inequalities, and lying underneath enormous masses of rock which had subsequently fallen from the roof. Besides spindlewhorls, beads, and curious nondescript articles of bone, it yielded bronze fibulæ of undoubtedly Roman workmanship, a portion of the ivory hilt of a Roman sword, and spiral armlets made of bronze and gilded, which possibly may not be Roman. Some of the ornaments certainly present a style of art which is not Roman, and which is by no means of a contemptible order. One curious circular brooch was composed of two plates of bronze soldered together, the front being very thin, and bearing flamboyant and spiral patterns of admirable design and execution.*

* A similar brooch from the same place is figured by Mr. Ecroyd Smith, in "The Limestone Caves of Craven" ("Trans. Hist. Soc. Lanc. and Chesh.", May 11, 1865).

It is unlike any Roman fibulæ in the composite make and the style of ornament. In the latter particular, it resembles a curious Celtic brooch, No. 492, in the Museum of the Irish Academy. It also recalls to mind a medallion on a Runic casket of silver bronze, figured by Professor Stevens as having been obtained from Northumbrian Britain, as well as a brooch figured by the same authority, which is preserved in the museum at Mainz, and assigned to the third or fourth century. The same ornament occurs also in the illumination of one of the Anglo-Saxon gospels at Stockholm, and in those of the gospels of St. Columba, preserved in Trinity College Library, Dublin. A dragonesque brooch, also, in bronze gilt, adorned with red and green enamel (pl. I, fig. 3), was not of Roman workmanship; as well as a second, made of coloured enamels, in red, blue, yellow, and green (pl. I, fig. 7). The latter is of the same design as two fibulæ in the British Museum—one discovered near Whittington Hill, in Gloucestershire; the other near Malton, in Yorkshire. All three were undoubtedly turned out from the same artistic school, and they may have been made by the same workman. On the whole, it is very likely, as Mr. Franks suggests, that these brooches are of Celtic workmanship made in this country. Their non-Roman type is proved, not merely by their absence from Gaul and Italy, but by their presence in countries where the Roman arms never penetrated. The difficulty of accounting for the same style of ornament in Scandinavia and Northern Germany, may be got over by supposing that they were exported from Britain or Ireland, as that mentioned by Professor Stevens undoubtedly was from Northumbria. The correspondence with the Anglo-Saxon illumination at Stockholm was probably due to the Irish origin of the artist. Ireland must have contributed something to the art as well as to the literature of Scandinavia from the sixth to the tenth centuries, because of her close connection with Denmark. There is nothing at all strange, that the art of the Celts in Ireland should have had some points in common with that of the Romanised Celts of Strathclyde, which, in the sixth century, embraced the whole of Lancashire and a considerable portion of Yorkshire.

Four bronze harp-shaped fibulæ were also furnished by the upper stratum, three of which are of the common Roman types, while the fourth is Roman in form, but in its exquisite ornamentation in enamel probably Celtic (pl. I, fig. 1); its front being composed of a row of small blue diamond-shaped inlays, with the intervening triangles filled up with red. The thicker portion near the hinge is perforated for the receipt of a jewel or of a large mass of enamel. Its delicate workmanship implies a high degree of taste in the fabricator. A split-ring fibula, with a

moveable pin, and a curious brooch, composed of bronze wire twisted into two elegant spirals (pl. I, fig. 8), and a small oblong flat brooch, with the front covered with triangles of blue and green enamel, are those which are worthy of especial notice.

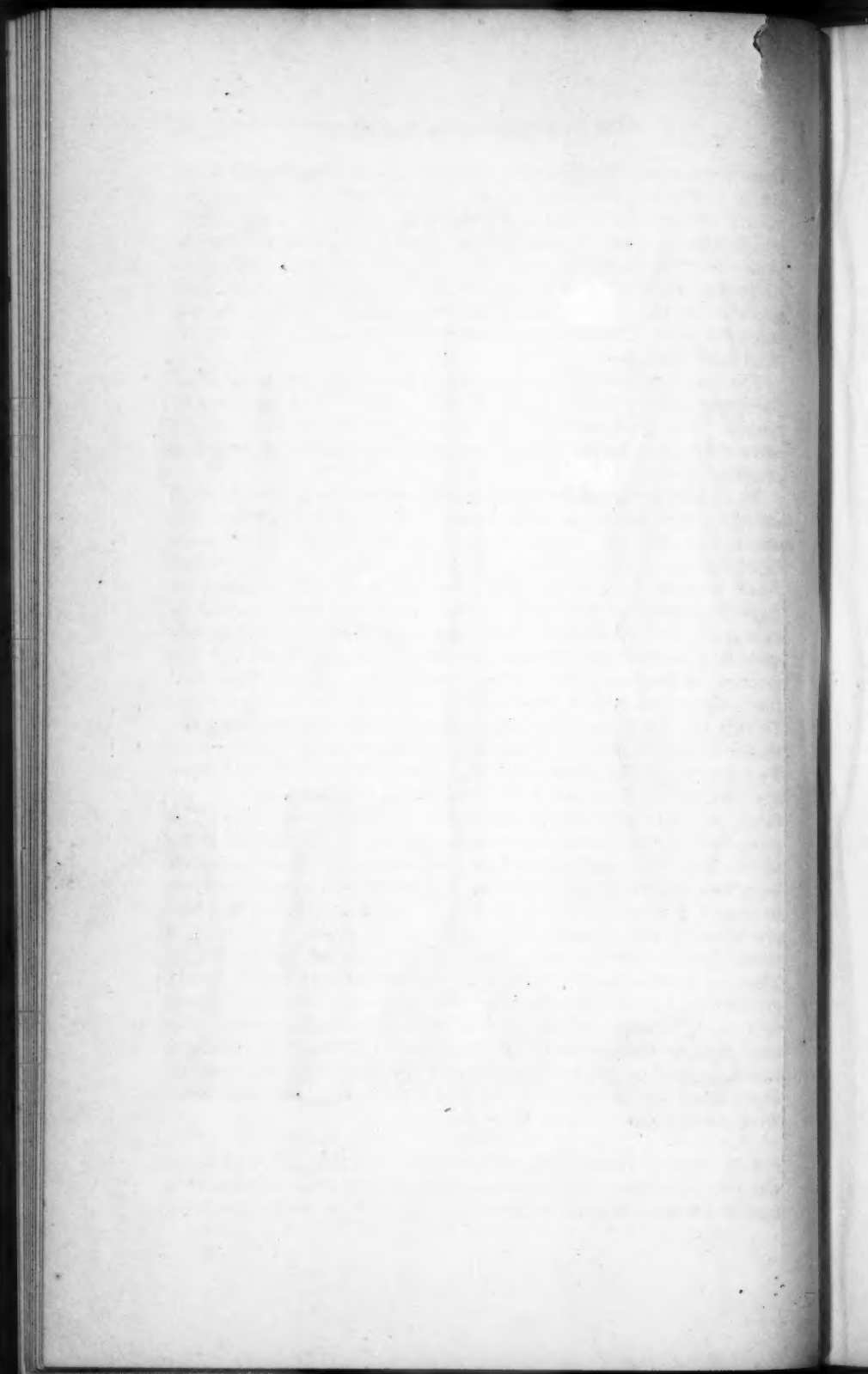
Among the miscellaneous objects in metal are two armlets, composed of twisted gilt bronze, and one fragment of an armlet in solid bronze, with right lines; finger rings—one plain bronze, a second ornamented with enamel (pl. I, fig. 4), and a third ornamented with circles and right lines; a small bronze disc (pl. I, fig. 6), which originally was ornamented with enamel disposed in a heart-shape; two small buckles respectively of bronze and iron; and a small bronze flattened pin, with a bicuspid termination (pl. I, fig. 2). As the two points exactly coincided with the circles on the ornaments of bone, there can be little doubt but that this curious object was employed as a pair of fixed compasses. There were also articles in iron which were too much corroded to allow of a guess at their use.

The coins consisted of two silver of Trajan, and the rest bronze; viz., four of Tetricus senior, one of Tetricus junior, one of Constans, Galienus, and Constantine II, and three barbarous imitations of the time of "The Thirty Tyrants".

The ornaments and implements of bone consist of carefully smoothed and pointed bone pins, and points intended to be fitted to a handle; knife-handles of bone and antler; three spindle-whorls, made of the perforate head of the femur; a bone stud; a perfect spoon-shaped fibula (pl. II, fig. 1), as Mr. Wild terms it; and several fragments, and eight nondescript articles, bearing a close resemblance to the handles of gimlets, which possibly may have been used as studs for fastening together thick clothing. The fact, indeed, that some have the central hole worn by the friction of a thong or fragment of some soft material, coupled with the state of many of their surfaces, renders this guess very likely to be true. In fig. 4, pl. II, the ornament in right lines, which once covered the surface as in fig. 3, pl. II, is very nearly obliterated by friction against some soft body, such as clothing. They are all more or less ornamented with concentric circles and right lines or dots. A reference to the figures 2, 3, 4 (pl. II), will give a better idea of their shape than a mere description. Two perforate discs may have been used as studs. Seven glass beads—five transparent and two of a bluish tint—were also found, and one of jet turned in the lathe. There are also many nondescript articles, consisting of sockets made of antler, and bone rods carefully rounded, and cut bones of uncertain use, as well as two spindle-whorls made of perforated Silurian pebbles. For the identification of the ivory boss of a sword-hilt I am indebted to the kindness of Mr. Franks. In the *débris*



OBJECTS IN BONE FOUND IN THE VICTORIA CAVE, SETTLE, YORKSHIRE.



there were many rounded pebbles with marks of fire upon them, which had been probably used as "pot-boilers", and other stones which were probably ancient hearths, and two or three slates, which were grooved in certain places, and which had probably been used for rounding bone pins. There was also, and especially just outside the entrance, a large accumulation of charcoal, mixed with the broken bones of the animals which had been eaten for food. The latter were abundant throughout the superficial layer in the cave.

The fragments of pottery were very abundant, and were all of the types usually found around Roman villas. One specimen of Samian ware, representing an animal in flight, and several other fragments, testify that some of it was imported into this country.

The bones obtained by the Committee are very numerous, and afford fair testimony as to the food of the occupiers of the cave during the time of the accumulation of the upper, or Romano-Celtic stratum (fig. 1, No. 5). The Celtic short-horn (*Bos longifrons*) formed by far the staple animal food. The variety of *Capra aegagrus*, or goat with simple re-curved horns, which is commonly met with in the Yorkshire tumuli, and in the deposits around Roman villas throughout Great Britain, furnished the mutton. A domestic breed of pigs, with small canines, furnished the pork. This bill of fare was varied by the use of horse-flesh. To this list must be added the venison of the roe-deer and the stag, but the remains of these two animals were singularly rare. Two species of the domestic fowl, and a few bones of wild duck and grouse, complete the list of the animals which can with certainty be affirmed to have been eaten by the cave-dwellers. The numerous remains, and some very gigantic, of the badger, those of the fox, wild cat, rabbit, hare, and watervole, have probably been introduced by the carnivora inhabiting the cave from time to time. The unbroken bones of the dog show that it was the attendant of the cave-dwellers, and was not eaten, as the animal certainly was by the rude platycnemic men of Denbighshire. There is nothing in the whole group of the remains which would give a clue to the date; but the very large percentage of domestic over wild animals implies that the cave-dwellers were pastoral rather than a family of hunters. The use of horse-flesh was universal in Roman Britain, and the *Bos longifrons* was not supplanted by the larger breed of the urus type till some time after the departure of the Roman legions.

§ 3. *Date of Habitation.*—There can be no doubt but that this strange collection of objects was formed during the sojourn of a family for some length of time in the cave; we have to account

for the presence of so many articles of luxury in so strange and wild a place. The personal ornaments, and the Samian ware, are such as would have graced the villa of a wealthy Roman, rather than the abode of men who lived by choice in recesses in the rock. In the coins we have a key which explains the difficulty. Some belonged to Trajan and Constantine, others to Tetricus (A.D. 267—273), while others are barbarous imitations of Roman coins, which are assigned by numismatists to the period just about the time of the Roman evacuation of Britain. These objects, therefore, could not have been introduced into the cave before the end of the fourth century, or just that time when the historical record shows us that the province of Roman Britain was suffering from the anarchy consequent on the withdrawal of the Roman troops. In the year 360, the savage Picts and Scots, pent up in the north by the Roman walls, broke in upon the unarmed and rich provincials, and carried fire and sword as far south as London. Their ravages were repeated from time to time, until the Northumbrian Angles finally conquered the Celtic kingdom of Strathclyde. It must nevertheless be admitted that, so long as the Celts of Strathclyde held their ground against the Angles, they would certainly follow the mode of life and the manners and customs handed down to them by their forefathers, the Roman provincials. And, therefore, it is very probable that these objects of Roman culture may have been used in that district which was the Northumbrian border long after they had ceased to be used in the regions conquered by the English. To say the least, there are two extremes between which the date must lie—the fourth and fifth centuries, as shown by the barbaric coins, and the year 756, when Eadberht finally conquered Strathclyde. It cannot be later, because of the presence of Roman, and the absence of all English, cultus. The cave, situated in a lonely spot, and surrounded by the gnarled and tangled growth of stunted yews, oaks, and hazel, which still survive in one or two places in the neighbourhood as samples of the primeval forest, would afford that shelter from an invader of which a native would certainly take advantage. We can hardly doubt that it was used by unfortunate provincials who fled from their homes, with some of their cattle and other property, and were compelled to exchange the luxuries of civilised life for a hard struggle for common necessities. In no other way, can the association of works of art of a very high order with rude and rough instruments of daily use be accounted for. In that respect, therefore, the Victoria Cave affords as true and vivid a picture of the troublous times of the fourth and fifth centuries as the innumerable burned Roman villas and cities; in the one case, you get a place of refuge to which the provincials fled; and in the other, their homes which had been ruthlessly destroyed.

§ 4. *The Neolithic Horizon.*—I must now pass on to the examination of the strata underneath this Romano-Celtic layer, as it may be called. At the entrance, it rested on a talus of angular fragments of limestone (No. 3 in figs. 1 and 2, p. 61), of precisely the same character as that on its surface, six feet in thickness, and running on the one hand into the scree at the bottom of the ravine, and on the other gradually thinning away as it entered the cave, until it disappeared altogether. It rested on a tenacious grey clay (No. 1, figs. 1 and 2), of unknown depth, which fills the greater part of the cave. On the surface of the latter, and underneath a spot where the *débris* was six feet thick, most curious traces of the cave having been occupied by man, long before the advent of the Romans, were discovered. Three rude flint flakes, the broken jaws and bones of the brown bear, red deer, horse, and *Bos longifrons*, as well as charcoal, a bone bead (pl. II, fig. 6), and other nondescript articles, were met with. The remains of the animals prove that the folk who then lived in the cave subsisted mainly by hunting, rather than on herds. A harpoon made of bone (pl. II, fig. 5), and of a form hitherto unknown in Britain, indicated also that they were fishermen. It is little more than three inches long, with a head and two barbs on each side opposite each other. The base presents a mode of securing attachment to the handle which has not been before discovered. Instead of a mere projection to catch the ligatures, there is a well cut barb on either side, that points in a contrary direction to those which form the head. Ample use for such an instrument would be found in Malham Tarn, as well as in the mere now drained called "Attermire", and turned into green fields, which are at the foot of the adjacent ravine. This group of remains, in its rude and savage facies, and in the absence of metals, contrasts strongly with that in the Romano-Celtic stratum above, and must be referred to a people in a low state of civilisation. Inside the cave (see fig. 1), where the intervening talus died away, the two layers coalesced on the surface, and became so intermingled that they could not be distinguished. The jaws and broken bones of a gigantic brown bear, and some of the ruder implements of stone and bone, as well as a stone celt discovered by Mr. Jackson some years ago, probably belong to the lower horizon, which, on the whole, may be assigned with tolerable certainty to the Neolithic age.

The majority of the remains of the brown bear, which occurred either on the surface of the clay inside the cave or embedded in it to a depth of a few feet, and sometimes associated with Romano-Celtic articles, may probably also be assigned to the lower horizon, although the animal was undoubtedly living in Britain during the Romano-Celtic occupation of the cave. On

the surface of the clay inside the caves, the two layers become so confused together that it is impossible to separate the one from the other. In one spot, however, the bear's bones occur underneath a layer of stalagmite two feet in thickness. One of the femora of the brown bear, docked of its articular ends by the action of teeth, is strongly suggestive of the work done by the jaws of the hyæna; but it would be rash to infer the presence of that Quaternary animal in the cave on so slender a basis. The shaft is polished all round to a vitreous lustre by friction against some soft substance such as leather. The same polish I have also observed on the atlas of a bear, and on a broken rib.

§ 5. *The Grey Clay.*—The clay which forms the basis of the plateau, and fills the cave, has, up to the present time, yielded no traces of man or beast. The even stratification, and the lines of calcareous matter, by which it is separated into layers as thin as the leaves of a book, show that it was the deposit of water more or less in a state of rest, and not hurrying violently along as in the water-caves under Ingleborough. It must have been deposited by water flowing from the cave into the ravine, or from the ravine into the cave, both of which hypotheses imply the presence of a barrier in the ravine some hundred feet high, or up to the water level in the cave, or that the ravine itself had been subsequently excavated. It is of unknown depth, a shaft of twenty-five feet deep failing to reach the bottom. The dip of the layer towards the interior of the cave implies that it was introduced from the mouth inwards. The traces of ancient glaciation in the neighbourhood, the large blocks of ice-borne Silurian rock resting on the mountain limestone, and the numerous moraines in the valley of the Ribble, show that anciently Ribblesdale was covered with glaciers. It is very probable that one of these was the barrier which is necessary for the accumulation of this singular bed of clay.

§ 6. *Résumé.*—The Victoria Cave was inhabited, as we have seen, first of all by a barbarous Neolithic family, and, lastly, after a very considerable interval, by Roman provincials, or, possibly, their descendants of Strathclyde, fleeing from the arms of an invader. Other caves in the neighbourhood, such as that of Kelko, near Settle, and that of Dowkerbottom, near Arncliffe, in Wharfedale, explored by Mr. Jackson and Mr. Denny, have afforded similar traces of their having been inhabited by Romano-Celtic refugees. The whole series stands at a level of at least 1200 feet above the sea, and would not have been chosen as habitations by civilised men except under the dire pressure of necessity.

They afford a touching picture of the social condition of Ribblesdale, from the fourth or fifth centuries—possibly as late as the eighth.

The Northumbrian Angles gradually pushed back the Romano-Celtic population westward, until at last King Eadberht accomplished the work, begun certainly before King Ina reigned in 547. The exact time, therefore, when the Romano-Celts were finally conquered, or driven away from Ribblesdale, cannot be ascertained in the absence of any record; for, during the war of more than two hundred years, the tide of conquest must have very frequently ebbed and flowed over that border-land. It is, therefore, impossible to give the precise date of the destruction of the Roman civilisation, which must have been maintained, more or less, by the Celts of Strathelyde.

Several other caves in the district are known to contain Romano-Celtic remains of the same character as those found in the Victoria Cave.

EXPLANATION OF PLATES I AND II.

PLATE I.

- FIG. 1. Bronze fibula inlaid with blue and red enamels.
 2. Flat bronze pin with bicuspid termination, probably used as a pair of fixed compasses for striking circles on some of the bone objects.
 3. Dragonesque bronze brooch, inlaid with red and green enamels.
 4. Bronze ring, inlaid with blue enamel.
 5. Harp-shaped bronze fibula.
 6. Bronze disc, formerly ornamented with enamel.
 7. Dragonesque bronze brooch, inlaid with red, blue, yellow, and green enamels.
 8. Bronze brooch with spiral ornamentation.

PLATE II.

- FIG. 1. Bone fibula ornamented with incised circles.
 2. Bone object, probably a handle, with incised circles, spiral lines, and rows of dots.
 3. Bone object, probably a handle, with incised right lines.
 4. Similar object, with ornamentation resembling that on fig. 3, but nearly obliterated by friction.
 5. Bone Harpoon.
 6. Bone Bead.

The objects figured in Plate I, and in figs. 1 to 4, Plate II, were found in the Romano-Celtic layer in the Victoria Cave, Settle, Yorkshire; whilst figs. 5 and 6, Plate II, were obtained from a lower stratum, probably of Neolithic age. All are figured of natural size.

DISCUSSION.

Mr. W. MORRISON, M.P., observed that Roman remains had been found near Settle. The land was so rich, letting at £7 the acre, that the locality would naturally be occupied by the Roman settlers; and the discovery of the coins of Tetricus suggested, as Mr. Dawkins pointed out, that the Romano-Celtic articles found in the cave belonged to some of the half-civilised inhabitants left after the withdrawal of the

Roman garrison, who, as history tells us, were unable to defend themselves from the incursions of the northern barbarians, and may have taken refuge in the cave. In 1745, a little boy, six years old, had been sent there with the family plate, when Prince Charlie's army advanced into England, it being a common belief at the time that the Highlanders lived on children. The femur of the bear was polished in the centre, and was rough at each end. It had been suggested to the speaker by Mr. E. T. Stevens, the curator of the Blackmore Museum, that it might have been used for rendering skins supple, and thus suitable for clothing. Two forked poles might have been fixed in the ground, and the bone firmly lashed to them, and the skin dragged backwards and forwards over it, as is done by some tribes of American Indians.

Mr. CHARLESWORTH inquired as to the nature of the bed of clay in the cavern, and whether it had been found to contain any land or fresh-water shells.

Mr. DENDY and the CHAIRMAN also joined in the discussion, and Mr. BOYD DAWKINS briefly replied.

The following paper was then read :

V.—*The BUILDERS of the MEGALITHIC MONUMENTS of BRITAIN.*

By A. L. LEWIS, Esq., M.A.I.

[Abstract.]

DIVIDING the inhabitants of Britain into three leading groups, the Kymric—long-headed, dark-haired and light-eyed; the Iberian, dark-eyed and dark-haired; and the Teutonic, round-headed, light-haired, and light-eyed—the author controverted the idea entertained by many, that the Iberians were the aboriginal race, and that they exclusively were the builders of the megalithic monuments which are found in different parts of Britain. He attributed those monuments to both the Kymric and Iberian divisions of the great Celtic race; and supported his views by a careful consideration of the statistics of the physical characteristics of the inhabitants of Great Britain collected by Dr. Beddoe, comparing the distribution of the different types of inhabitants with the distribution of the megalithic monuments throughout the country; and concluded with an appeal to all interested in the science to collect further statistics.

DISCUSSION.

Mr. LUKE BURKE maintained that the only mode in which reliable results were to be obtained in archæology was that by which geology had achieved its success. We must discard all hypotheses, whether historic or otherwise, and treat monuments, languages, myths, and other traditions, just as the geologists treat rocks and fossils, endeavouring, by their careful study and comparison, to evolve from them a stratification of epochs and formations, and thus gradually compel

them to reveal their true import and relations. He could not but regret, therefore, when he saw labours expended in researches based on historical or other conjectural data, as in the case of the paper just read.

Mr. BOYD DAWKINS called attention to the impossibility, in the present state of our knowledge, of assigning any prehistoric tumuli or megalithic structures to any one race now dwelling in Europe. At the present time there are certainly two distinct peoples in Great Britain—Teutons and Celts; and it is almost certain that the Iberians are also represented by the dark-haired inhabitants of Wales. It is very probable that the last were conquered by the Celts, exactly as the Celts were conquered by the Teutons; but it is very improbable that they were the first and only prehistoric race that had possession of our land after the palæolithic age. Till we know all the races it will be impossible to decide who the builders of any particular monuments may have been, by an appeal either to the crania, or to the style of art; because some of the races of which the very names have perished, may have been long-headed, or short-headed, or have constructed tombs and dwellings and temples precisely after the same fashion as the three races which are known. To invoke the Druids, with Mr. Lewis, is to import into the discussion an element of error, because there is no evidence that they ever existed as a dominant priestly caste either in Gaul or in Britain, and because the views of the antiquarian, by which nearly all unknown monuments are termed Druidic, are obviously unsupported by fact.

Dr. CHARNOCK thought a better title for the paper would have been so-called "Celtic Monuments". A megalith was a great stone, a *menhir*—literally, "long stone". The author of the paper seemed to include under the term "megalith" all the stone monuments in Britain, as the cromlechs, cistvaen, etc. The term "builders" could not properly be applied to the putters up of a *menhir*. It was not probable that the stone monuments in question had been erected by those who named them; otherwise, they would not have variously designated them cromlech ("crooked stone"), dolmen ("table-stone"), cistvaen ("stone chest"). Mr. Lewis had spoken of the Iberian element in Britain. There was evidence of Spaniards having settled in Galway, but no proof of any Iberian element in England.

Mr. HYDE CLARKE observed that the builders of the monuments of Britain must be the builders of the monuments elsewhere. The only ethnological area that is coincident with these monuments is that of the Caucaso-Tibetans. Within that ancient area are now found the megalithic building tribe of the Khasias. In the absence of better evidence, the only feasible solution is, that such tribes accompanied the Caucaso-Tibetans, and that as the Caucaso-Tibetans are represented *in situ* in the Caucasus, so are the stone-builders represented *in situ* by the Khasias.

Mr. DENDY regretted that, in his illustration of the formation of megalithic monuments, the author had laid so much stress on the races that, in comparatively recent ages, had inhabited the regions in which these ancient relics have been found. Emigrations and immigrations

have been so constant, during and after the era of their construction, that it is vain to expect an elucidation by modern ethnology. He believed that a very deep insight into history and tradition was essential ere the archaeologist could form any rational conclusions on the subject. The frequent resemblance of these monuments throughout the world indicated a universality of design, natural to a variety of scattered peoples, that may once have been associated. In our own country, the Druids, and other ancient Britons, are, of course, prominent in the history of cairns and dolmens; yet archaeologists, from Geoffery of Monmouth to Colt Hoare, have left both the era of formation and the material of construction still to be demonstrated.

MR. WAKE, COL. LANE FOX, and the PRESIDENT, also joined in the discussion.

MR. LEWIS, in reply, said that he had to thank the members for the kindness with which they had received a paper which dealt with the subject in a new and, perhaps, at first sight, an unsatisfactory manner. He had taken, however, as the President had pointed out, only one point out of many from which to view a very large subject, and his paper was moreover intended to be rather destructive than constructive. With respect to the Druids, he differed from Mr. Boyd Dawkins, and thought there was great reason to believe that many of the monuments under consideration had been constructed by the Celts under the influence of the Druids, much as the cathedrals, etc., of Europe had since been constructed under the influence of the Romish clergy: this, however, was a branch of the subject which he had treated more fully in a former paper. He did not think that the men of the palæolithic period had any connection either with the megalithic monuments or the present inhabitants of Britain. Dr. Charnock did not like the term Iberian, which, he was aware, was open to objection, and was willing to abandon in favour of any better one that might be suggested; in the meantime he had, however, defined what he meant by an Iberian, and he thought the mere question of name did not materially affect the conclusions arrived at. In reply to some observations of the President, he might mention that the curiously inscribed stones of Gavrinis in the Morbihan, some of which were of large size, were, it was said by local archaeologists of some eminence, brought from a distance, and must have been floated over to the island on rafts. Dr. Charnock had also remarked that the stones at Locmariaker seemed to him to have come from some distance; earth brought from a considerable distance was also often found in tumuli. He fully agreed with Mr. Dendy, that archaeology and history should be studied together, and would be obliged to Mr. Dendy if he would refer him to any authentic history which had any bearing upon the question. He was not prepared to go so far as Mr. Hyde Clarke, and to say that all the monuments of this description must have been built by the same people, but only that a common influence of some kind (which might be Phœnician) must have extended throughout the area in which they were found. Mr. Wake had remarked that they were only found in countries where a long-headed race had been, and that the Celts being broad-headed,

they must have been built by a pre-Celtic race. There were, however, broad-headed and long-headed Celts (so-called); and it was certain that any pre-Celtic European race that might have existed was without the knowledge of metal tools, while there was much reason to believe that some of the monuments were constructed by races which had that knowledge.

The DIRECTOR then read a Notice, by Dr. J. Barnard Davis, F.R.S., of the Recent Anthropological Memoirs of Professor Calori, Corresponding Member of the Anthropological Institute, which will be found in the miscellaneous portion of this number of the *Journal*.

APRIL 17TH, 1871.

SIR JOHN LUBBOCK, Bart., M.P., F.R.S., *President, in the Chair.*

THE minutes of the last meeting were read and confirmed.

The following new members were announced: THOMAS DAVY, Esq., 24, Grove-end Road, St. John's Wood, N.W.; Rev. MARSDEN GIBSON, Spital Square, E.C.; ADAM MURRAY, Esq., 4, Westbourne Crescent, Hyde Park, W.; and CHARLES ROOKE, Esq., F.G.S., Belle Vue Cottage, Scarborough.

The following presents were announced, and the thanks of the meeting voted to the respective donors:—

FOR THE LIBRARY.

- From the SURGEON-GENERAL, U.S.—Report on Barracks and Hospitals, with Descriptions of Military Posts. Circular No. 4, 1870.
- From J. W. JACKSON, Esq.—Researches on the Dynamics of Vital Force. By Dr. Reichenbach. Translated by Dr. Ashburner.
- From JAMES BURNS, Esq.—Human Nature: a Record of Zooistic Science and Popular Anthropology. 4 vols.
- From the SOCIETY.—Proceedings of the Royal Geographical Society.
- From the SOCIETY.—Proceedings of the Asiatic Society of Bengal for December 1870 and January 1871.
- From the VIENNA ACADEMY.—Jahrbuch der Kaiserlich-königlich geologischen Reichsanstalt, 1870; and Verhandlungen der k.-k. geolog. Reichsanstalt, 1870.
- From the AUTHOR.—Die Menschenfresserei und das Menschenopfer. Von H. Schaffhausen.
- From the EDITOR.—Nature, to date.

Mr. F. G. H. PRICE exhibited an antler of the Red Deer (*Cervus elaphus*), which had been used as a pick, and was found in gravel near Ipswich.

Mr. CHARLESWORTH exhibited an obsidian flake and core from Mexico; and an Aztec mirror in iron pyrites.

The following paper was read :

VI.—*The MENTAL CHARACTERISTICS of PRIMITIVE MAN, as exemplified by the AUSTRALIAN ABORIGINES.* By C. STANILAND WAKE, Esq., Dir. A.I.

IN a former paper, I endeavoured to trace the most prominent physical characters of the aborigines of Australia. In the present one, I intend to refer to the more striking intellectual and moral characteristics of this peculiar race. My object in thus doing is a double one. I wish, primarily, to establish what are the real mental phenomena exhibited by the natives of Australia; and secondarily, to show approximately the condition in which man generally must have existed in the primeval ages, not necessarily when he first appeared on the earth, but so soon as the struggle for existence between man and man commenced, and the selfish instincts of humanity had had time to become fully developed.

The mental characteristics naturally divide themselves into those intellectual and those moral. To speak, however, of intellectual phenomena in relation to the Australian aborigines is somewhat of a misnomer. This race presents, in fact, hardly any of what are usually understood as the phenomena of intellect. Nor could it be otherwise with savages who, almost without clothing or ornaments, with few implements or manufactures, and with very inferior habitations and means of water-locomotion, have no aim in life but the continuance of their existence and the gratification of their passions, with the least possible trouble to themselves. When, therefore, I speak of intellectuality, I refer to that simple activity of the mind which is necessary to the performance of the actions required for the maintenance of life, and for the display of those simple phenomena, almost instinctive, nevertheless, in their nature, which may be supposed to result from the reflective exercise of the human mind on external objects, as distinguished from the merely instinctive thought of the animal. What I thus describe as the intellectual phenomena of the Australian aborigines are few, and have relation only to the exigencies of social life. The ingenuity displayed by them in overcoming the many difficulties they have to contend against in dealing with the hard conditions of nature is often, no doubt, very great. Their appliances are, however, often temporary, although not always so, as may be seen from their use of nets for fishing and bird-catching; these being well made, as are generally also their baskets, bags, and mats. Great

ingenuity is, moreover, undoubtedly shown in the native weapons; one of which—the boomerang—would appear to be unknown, in principle at least, to any other race. It must be noted, however, that we do not know the progressive stages through which the boomerang has arrived at its present perfection, and that its origin, like that of fire-making, may have been in the accidental recognition of an operation of nature.

The skill of the aborigines is well displayed in the well-sinking, so many examples of which Sir George Grey found in North-Western Australia, near the Hutt River. Mr. Eyre also met with similar constructions in his journey from Adelaide to King George's Sound. Of those near Smoky Bay he says: "These singular wells, although sunk through a loose sand to a depth of fourteen or fifteen feet, were only about two feet in diameter at the bore, quite circular, carried straight down, and the work beautifully executed." The natives could reach the water only by means of a pole placed against the side of the well, and its use required the greatest care lest the sand should fall in.

In some respects, the drawings and paintings which have been found in various parts of Australia are the most interesting phenomena presented by the native intellect. The cave paintings discovered by Sir George Grey are too well known to require description here; and the same may be said of the drawings on Clark's Island, near Cape Flinders, seen by Mr. Cunningham.

Mr. Collins long ago stated that most of the implements used by the natives of Port Jackson "are ornamented with rude carved work, effected with a piece of broken shell." He adds that on the rocks he had seen "various figures of fish, clubs, swords, animals, and even branches of trees, not contemptibly represented." It will not be pretended that any of the native drawings furnish evidence of great artistic skill. They may occasionally exhibit a certain amount of rude vigour, but as a rule they may be classed with the productions of children. As to most of them, moreover, the natives assert that they know nothing as to their origin; and this we may well believe, when, as Mr. Oldfield states, they cannot distinguish the picture of a man from that of any other object, unless all the lesser parts, such as the head, etc., are much exaggerated.

The activity of the Australian intellect may be supposed by some persons to be shown in the system of marriage restrictions, which appears to be in operation, more or less, throughout nearly the whole continent. These restrictions, or the rules which enforce them, must not be viewed, however, as having been arbitrarily formed for some special and foreseen purpose. They have, undoubtedly, grown up out of an earlier social phase. The same

must be said of language. This is not the creation of intellect; and, therefore, the complexity of its structure, the richness of its grammatical forms, or the copiousness of its vocabulary, affords no proof of great intellect, although they show considerable mental activity.

The aborigines have no system of government, and no chief, in the usual acceptation of that word. Admiral Wilkes, of the United States Exploring Expedition, in referring to this point, states that the universal reprobation of their associates, which follows a breach of ancient customs, has a strong tendency to preserve a strict observance of them. The same thing is said by all other writers who have referred to the subject, and nothing more conclusively shows the low mental position occupied by the Australian aborigines, when taken in connection with the barbarity or absurdity of most of the customs thus enforced.

It is true that Sir Thomas Mitchell says of the aborigines: "They have been described as the lowest in the scale of humanity, yet I found those who accompanied me superior in penetration and judgment to the white men composing my party. Their means of subsistence and their habits are both extremely simple; but they are adjusted with admirable fitness to the few resources afforded by such a country in a wild state." This testimony is doubtless true; but the facts it proves are quite consistent with the low position I have assigned to the Australian aborigines, a position which their moral defects, as detailed by Sir Thomas Mitchell himself, and by other writers, requires for them.

Moral Character.—Collins said of the natives of New South Wales that they were great thieves, even stealing objects of which they could not know the use; that they were "adepts in the arts of evasion and lying"; that they were revengeful, jealous, courageous, and cunning; that they displayed great talent for mimicry; and that they were susceptible, notwithstanding their other defects, of friendship, and capable of sorrow, although this was with them a very transient emotion. On the other hand, Mr. Eyre says of the natives of South Australia with whom he came into contact, that they are frank, open, and confiding, and that they are easily made friends, and then associate with strangers with perfect freedom and fearlessness. It must not be thought, however, that Mr. Eyre found the natives of South Australia to be without social failings. The very persons whom he describes as being so affectionate with each other and with their children are just the reverse with their wives.

We shall see hereafter how heartless is the treatment of the native women; and this conduct in relation to their own people renders less improbable the statement of Sir Thomas Mitchell,

that when he reached the Goulbourn River (Port Phillip) he was at length convinced "that no kindness had the slightest effect in altering the disposition and savage desire of these wild men to kill white strangers, on their first coming among them." This undoubtedly betokens a very low condition of the moral nature, which is no less shown by reference to many of the native customs. Thus, Sir George Grey says that in practice the aborigines reject "all idea of the equality of persons or classes. The whole tendency of their superstitions and traditional regulations, is to produce the effect of depriving certain classes of benefits which are enjoyed by others." The favoured classes are the old or the strong, who obtain their advantages at the expense of the female sex, the young, and the weak, who are condemned to "a hopeless state of degradation".

We see in these laws and customs, which underlie the very constitution of Australian aboriginal society, the operation of that "unmitigated selfishness" which Mr. Gideon Lang declared to be the disposition of at least all the male natives. The only inference that can be made from this fact, and from certain other phenomena, mental and social, to be shortly mentioned, is that moral ideas have in the case of the Australian aborigines remained almost wholly undeveloped. This is shown by nothing better than the slight regard paid among them to female chastity. Thus, Collins said of the natives of New South Wales that chastity was not a virtue on which the women prided themselves, although they appeared sometimes to learn to be ashamed of its infraction while in the presence of white people. The testimony of Mr. Eyre is still stronger, if possible, to the same effect. He says that no such virtue as chastity appears to be recognised, women prostituting themselves freely throughout their whole lives. Mr. Eyre adds other particulars in a Latin note. Thus, he says that among many tribes it is customary for the youth of both sexes to lie indiscriminately together, this first taking place when the boys are thirteen or fourteen, and the girls ten years of age.

In the presence of such an entire want of the idea of personal purity as these facts reveal—facts which agree perfectly with the statements made by travellers in other parts of the Australian continent of the slight value set by husbands on the chastity of their wives, and with the general character ascribed, as we shall see, to the native women—there can be no wonder that infanticide and abortion are very common.

The want of natural affection exhibited in these customs is shown in other ways. Thus, Mr. Eyre asserts that, when ill, a wife is sometimes left to die, if the tribe is removing to another locality, and "parents are treated in the same manner when

helpless and infirm." It should be added, however, on the testimony of Mr. Oldfield, that among the Western Australians great care is taken of the blind, deaf, dumb, halt, and withered, by their comrades. Wilkes tells us that, so far as his observation went, the women appeared to care little for their children. This may, however, have been defective observation, or, at all events, the conduct he noticed is consistent with the existence of the feeling contrary to that suggested by Admiral Wilkes.

In the West, also, the mother would seem to have a real affection for her offspring, although there, too, it sometimes has curious accompaniments. Mr. Oldfield, when speaking of cannibalism among the natives generally, says that a man will, in case of extremity, kill his child to satisfy his hunger. In these cases, "the mother is not permitted to make loud lamentation, else she is beaten; she may, however, express her grief by uttering low, stifled moans, but how great soever her sorrow for the loss of her child may be, it becomes somewhat assuaged when the head of the victim, the mother's legal perquisite in all such cases, is thrown to her, and this she proceeds to eat, sobbing the while." It is only fair to record, as a set-off against the facts above stated, that Mr. Eyre indignantly protests against those who represent the Australian native as being entirely wanting in natural affection.

How are we to reconcile the apparent inconsistency between the display of affectionate emotion recorded by Mr. Eyre, and the treatment of the native women? In South Australia, the women are frequently much ill-treated by their husbands or friends, being "beaten about the head, with waddies, in the most dreadful manner, or speared in the limbs for the most trivial offences." The woman is, in fact, the slave of the man. Collins makes this remark of the natives of New South Wales; and Wilkes confirms him in his statement of the cruel treatment their women receive, the waddy being "applied to their heads in a most unmerciful manner." Woman appears, in fact, to be treated as a dog, and no one will take her part, even though she really be innocent of that for which she is punished. A man, adds Sir George Grey, may even beat the wife of another without retaliation on himself, but his own wife may expect in her turn to receive a beating at the hands of the husband of the woman first maltreated. Mr. Oldfield says "that it is remarkable" as showing the low estimation in which the female is held by all the Australian aborigines, "that none of the dreaded In-gnas are of that sex, and from this and other considerations we may infer that the New Hollanders do not believe that the women possess souls."

We cannot be surprised that, considering their unenviable

position, and the fact that the old men usually secure them for themselves, the younger females are much given to intrigue, and they are quite willing to run the risk of a spear through the calf of the leg, or even a more severe punishment, at the hand of their husbands. The character of the native woman, however, does not appear to be such as to secure her much sympathy. Sir George Grey states that "the ferocity of the women, when they are excited, exceeds that of the men; they deal dreadful blows at one another with their long sticks; and if ever the husband is about to spear or beat one of his wives, the others are certain to set on her, and treat her with great inhumanity." The old wives are extremely jealous of the young ones. The women, moreover, are not without influence in the tribe. The old ones often incite the men to acts of revenge; and when once an old woman begins a chanting address of this kind, "nothing but complete exhaustion induces her to stop, and the instant she pauses another takes up the burden of the song. The effect some of them produce upon the assembled men is very great; in fact, these addresses of the old women are the cause of most of the disturbances which take place."

The various facts hitherto detailed are explainable only on the assumption that the natives of Australia are, in all questions of morality, and in all matters connected with the emotional nature, mere children. There may occasionally be great display of affection, and this, as in the case of women who have lost their young children, may sometimes last for a considerable period, but, however intense the emotion, it is not, as a rule, of long continuance. The very affection for children, which is the chief redeeming feature in the character of the Australian native, is carried so far as to amount to a weakness. The children are seldom, if ever, corrected, and the boys soon become utterly regardless of their mothers, and often tyrannise over them. It is, however, by the nature of their general ideas of morality that the true condition of this people must be determined, and, judged of by this test, such condition must be of a very childish character. They have, undoubtedly, the simple notion of a distinction between right and wrong; but we shall not be incorrect if we affirm that it is founded altogether on the rights of property. This is evident from the ideas entertained as to theft. To take that which belongs to another native is, no doubt, considered a great crime, for it interferes with the rights of property. To steal from a white man is, however, very different, and, with few exceptions, the tribes met with throughout the whole continent appear to be dexterous thieves.

That the native notions of morality are founded on the rights of property is shown by other considerations. Thus, the natives

see nothing morally wrong in adultery, as is shown by their readiness to lend their wives to their friends, and by the custom of women married to old men having young lovers, a practice which Mr. Oldfield thinks is winked at by their husbands. The men can, however, be very jealous, and the recognised punishment for the stealing or running-off with another man's wife is either spearing in the calf of the leg, or standing to receive the spears of the offended tribe with only a shield as a safeguard, which, however, if the culprit be dexterous, will protect him from injury. The woman is dealt with at the discretion of her husband, and sometimes, says Oldfield, "she is delivered up to the tender mercies of the other women of the tribe, who, seizing and throwing her down, sit upon her body, which they scarify in a dreadful manner with sharp flints." Thus, the property interfered with is generally more severely punished than the man who appropriates it.

There seems, indeed, to be an almost total absence from the mind of the Australian native of any idea of abstract morality, or even true instinct of moral propriety. The immaturity of nature which this fact shows is revealed also by the superstitious notions with which the native mind is saturated. It is not necessary for me to enter into particulars of the many curious superstitions which show the low moral condition of the Australian aborigines. Many of these are connected with the belief in the existence of spirits, such a belief, which is evidence of some notion of a future life, being universal. The idea of a future life associated with it is, however, very indefinite, and has had a negative origin. The savage cannot form any idea of death, and, therefore, he supposes the dead still to exist, and he sees their activity in various operations of nature which affect him more or less injuriously. It is very improbable, however, that the Australian native ever really thinks on the subject; his actions in relation to which are governed by mere traditional instinct. His notions as to the existence of a Great Being have arisen, no doubt, from the belief in the In-gnas, or shades of the dead. Dr. Lang is certainly right when, in opposition to Strzelecki, he affirmed that the Australian aborigines do not recognise a God. They have nothing whatever, says Dr. Lang, of the character of religion, nor is there any trace among them of idolatry.

The opinion that the Australian aborigines are still but children in their general mental development is quite consistent with certain other phenomena, which may be shortly referred to. Thus Wilkes says of the natives of New South Wales: "They are not great talkers, but are usually silent and reserved; they are generally well disposed, but dislike to be much spoken to, particularly in a tone of raillery." Wilkes adds, "their great

timidity has caused a false estimate to be put upon their character, by ascribing to it great ferocity." The furious onsets made by strange natives on parties of white men, "arise from the panic with which they are seized depriving them temporarily of reason." Like children, in fact, they are afraid of the ghosts which they conjure up, although in the present case those which the Australian fears take the substantial form of white Europeans. The seemingly ferocious conduct of the natives may be explained partly by reference to timidity and partly by their belief that the white man has returned to claim his property, or at least that he wishes to appropriate that of the tribe. This belief is probably the real explanation of the unfriendly opposition usually met with by travellers in the interior, pleasant exceptions to the rule being furnished by the natives who assisted Leichhardt near Port Essington, and by those who supplied Mr. Eyre with water during his persevering struggle to reach King George's Sound, round the head of the Great Bight. The deceitful conduct of which so many travellers complain, and which led Commander Stokes to say of the Australian aborigines that, "like all savages, they are treacherous" (Leichhardt, however, limiting the assertion to the coast blacks), is often due to another cause. Stokes does, indeed, say of the natives of the north-west coast that they are generally "suspicious rather than treacherous." The latter quality, however, results from the former, and it is suspicion, doubtless, which sometimes leads to actions which appear otherwise to be inexplicable. The custom found among all the tribes, apparently, of concealing spears in the grass and drawing them along the ground with the toes, is evidence of the combination in the native character of both cunning and suspicion, at least, if not of treacherous feeling. I cannot help thinking, nevertheless, that the difference in the reception experienced by various travellers at the hands of the natives has in great measure a *personal* origin. The savage, as the child, instinctively likes or dislikes a stranger, and hence when one person may be violently repulsed another will be welcomed by him, until his latent suspicions are brought into active operation through some ill-judged act of his visitor.

One other characteristic of the Australian aborigines deserves to be mentioned: it is the power which grimaces have over them. Captain King says that friendly terms were renewed with the Cape Flinders tribe chiefly by means of grimaces and ridiculous gestures, which, he adds, are "always acceptable to the natives of this part of the world." Com. Stokes made the same discovery when exploring Clarence Strait, where two of his companions escaped spearing only by dancing and making grimaces for a considerable period, until the attention of their ene-

mies was diverted elsewhere. A like mental phase is exhibited in the power of mimicry which the natives possess in a high degree. I may remark that these characteristics are consistent with the talkative and merry nature noticed by many travellers, especially among the young natives, and with the universal love of what they know as music, singing, and dancing.

To sum up what has gone before, it is evident that the aborigines of Australia, as compared with the races who have made further progress in mental culture, are yet in the condition of children. Among all the tribes, whether the more hostile ones of the east, or those which in the west appear to give evidence of a milder disposition, there is the same imperfect development of moral ideas. In fact, none of them have any notion of what we call morality, beyond the simple one of right and wrong arising out of questions of property. With this moral imperfection, however, the Australian natives exhibit a degree of mental activity which, at first sight, may be thought inconsistent with the childish position here assigned to them. It is evident, however, that this activity results from the position in which the Australian is placed. Extremely indolent when food is plentiful, when it is scarce the greatest exertions can be made for its acquirement, and the repeated exercise of the mind on the means of accomplishing the all-important end of obtaining food has led to a development of the lower intellectual faculties, somewhat disproportionate to the moral ideas with which they are associated. Probably, it is a result of the undue mental activity thus shown that idiocy is common among the natives when old age is reached, although not among the young. Another consequence is seen in the proud independence exhibited among many of the tribes, which often gives them an air of haughtiness and insolence.

In view of the facts I have stated, how is it possible to assert that this race has degenerated from a higher state of civilisation? And yet this is the position taken by some writers. So far, however, as I can judge, the phenomena referred to in the present paper are utterly inconsistent with the degradation supposed. The negative evidence furnished by the absence of many things possessed by other barbarous peoples, showing such a deficiency in the conveniences of social life, seems to me to be a sufficient refutation of such an opinion. That the Australian aborigines do possess certain points of affinity with other races is unquestionable, and I think it is extremely probable that the inquiries of Dr. Bleek point in a right direction. They do not, however, prove that the Australians have fallen from a higher state of civilisation, or that, as a race, they have been derived either from Southern India or from Northern Asia. The facts

which appear to support such a notion as this are explainable on the assumption, which may, I believe, be supported by physical data, that the Australians are more or less a mixed people. Probably long before the establishment of the Chinese Empire there was a great movement of Asiatic peoples, the so-called Scythic element, which spread throughout the Indian peninsula, and reached Southern Africa on the one side of the Indian Ocean and Australia on the other. Nowhere, except perhaps in the Indo-Chinese peninsula, was this Scythic element so powerful as to destroy or to absorb the native element, and in Australia especially its influence was comparatively weak, since it reached that continent already diluted by contact with the so-called Malay peoples.

It is very questionable, moreover, whether the Scythic element exhibited much superiority in mental culture over the native one by which it has been absorbed. It certainly has not sufficed to raise the Australian aborigines from their primitive barbarism, the phenomena presented by which are quite inconsistent with the idea that they have fallen from a higher state of civilisation. A race, whatever degradation it may undergo, could never lose all trace in its social condition of that which it once possessed, and sink back to the exact state in which it must have been when it first emerged from a condition of almost absolute barbarity. This, morally at least, is the position of the aborigines of Australia; and the only conclusion, therefore, I can draw is, that they are something more than the race children of the present era—that, in fact, they represent the childhood of humanity itself, revealing to us the condition of mankind, if not in primeval times, yet when the original potentialities of man's being had been but slightly developed by the struggle for existence, and when, by the separation of families, opposing interests had been created, with their endless consequences of violence and bloodshed. This could not have been long after man's first appearance on the earth. Mr. Darwin seems to refer the origin of the several human races by sexual selection to the time when their progenitors had "only doubtfully attained the rank of manhood." "Man's ancestors would then," says Darwin, "have been governed more by their instincts, and even less by their reason, than are savages at the present day. They would not at that period have partially lost one of the strongest of all instincts, common to all the lower animals, namely, the love of their young offspring; and consequently they would not have practised infanticide. There would have been no artificial scarcity of women, and polyandry would not have been followed; there would have been no early betrothals; women would not have been valued as mere slaves." The practices thus condemned show themselves only as the intel-

lectual faculties are developed; and as they agree well with the condition of the Australian aborigines, we may suppose that they represent one of the earliest stages in the progress of mankind towards that high culture which is exhibited by the European.

The following notes were taken as read:

VII.—NOTES *on a* COMPARATIVE TABLE *of* AUSTRALIAN LANGUAGES. By the REV. GEORGE TAPLIN, Superintendent of the Native Industrial Settlement at Port Macleay, Lake Alexandrina, South Australia.

THIS table has been constructed so as to correspond as nearly as possible with the comparative table of Polynesian and Melanesian dialects found in Dr. George Turner's work, "Nineteen Years in Polynesia."

The sounds of the letters are adopted from the orthography recommended by the Royal Geographical Society. The consonants are to be sounded as in English, except that *g* is invariably hard. The vowels are to be sounded, for the most part, as in the following English words: *a* as in *father*; *e* as in *there, they*; *ei* has the sound of long *i*; *i* as in *fatigue*; *o* as in *old*; *ow* as in *cow, now*; *u* as in *rude*; and *oo* as in *moon*. *Y* is sometimes used for long *i*, as in *pyabed*; *ng* at the beginning of words is a common nasal sound in all Australian languages; *dl* and *ny* are also found at the beginning of words; *y* at the beginning of a word or syllable has a consonantal sound, as *yarra, goyarra*.

As this table has been compiled from various sources, I have endeavoured to get as much uniformity of sound as possible, and have altered the spelling for this purpose, where I felt warranted in doing so.

A singular uniformity will be observed in the words for *hand, eye, tongue, and blood*—especially the first three; and in a less degree for the word *mouth*. There is also a great uniformity in the word for *seeing*.

The personal pronouns exhibit great uniformity, with two remarkable exceptions; viz., the Port Phillip and Wimmera dialects.

Of course, I cannot speak positively of all the dialects; but those I have examined have led me to conceive it probable that in Australian languages the verb has only a participial form; for instance, that *tangulun ap* means *I standing*, and not the indicative *I stand*; that *mempin atte* means *by me striking*, and not *I strike*; and that *nakkir ap* means *I having seen*, and not *I saw*. I know this is the case with the language of the Narrinyeri tribes, because they are continually using the present tense as an adjective. The word *memp* means *strike* (im-

perative); but it is not *ngape memp*=*I strike*, but *mempin ap*=*I striking*.

I think it probable that the aboriginal languages may be divided into two classes. The aborigines evidently belong to two races—one like the Eastern Polynesians, and the other like the Western, or Melanesians. One race has straight hair and a lighter complexion; the other has curly hair, and is darker. And perhaps the characteristic of the languages of the former race may be monosyllabic pronouns, and of the latter race polysyllabic pronouns. This would correspond with the distinction which exists between the same parts of speech in Polynesia and Melanesia.

It will be observed that there are many omissions in some of the lists of words. This arises from the persons who collected them not having ascertained the words for those omitted. And I may remark that the omissions of writers of vocabularies are often very unaccountable. Words of the commonest kind are omitted. For instance, Meyer, in his vocabulary of the Encounter Bay dialect of the Narrinyeri, has omitted the word for "small", *muralappi*, and yet he evidently understood the language well.

As it may be desirable to give a sketch of the grammar of an aboriginal language, I proceed to append some account of the grammar of the language of the Narrinyeri.

1. This language is called *Yarildewallin*.
2. There are no articles in this tongue.
3. Nouns are declined in the singular, dual, and plural numbers. There are six cases of nouns. The following is the declension of the noun *korni*, "a man".

SINGULAR.

Nom.	<i>Korni</i> ,	a man.
Gen.	<i>Kornald</i> ,	of a man.
Da.	<i>Kornangk</i> ,	to a man.
Ac.	<i>Korn</i> ,	a man.
Voc.	<i>Korninda</i> ,	O man.
Ab.	<i>Kornil</i> ,	by a man.
Exative.	<i>Kornanmant</i> ,	from a man.
Ergative.	<i>Kornanyir</i> or <i>Kornald</i> ,	with a man.

DUAL.

Nom.	<i>Kornengk</i> ,	two men.
Gen.	<i>Kornengal</i> ,	of two men.
Da.	<i>Kornungengun</i> ,	to two men.
Ac.	<i>Kornengk</i> ,	two men.
Voc.	<i>Kornula</i> ,	O two men.
Ab.	<i>Kornenggul</i> ,	by two men.
Exative.	<i>Kornungengun</i> ,	from two men.
Ergative.	<i>Kornungengun</i> ,	with two men.

PLURAL.

Nom.	<i>Kornar</i> ,	men.
Gen.	<i>Kornan</i> ,	of men.

Da.	Kornungar,	to men.
Ac.	Kornar,	men.
Voc.	Kornuna,	O men.
Ab.	Kornar,	by men.
Exative.	Kornungar,	from men.
Ergative.	Kornan,	with men.

4. Pronouns are declined in the singular, dual, and plural. The following is the declension of the personal pronouns.

SINGULAR.			DUAL.		PLURAL.	
Nom.,	<i>ngape</i> ,	I.	<i>ngel</i> ,	we two.	<i>ngurn</i> ,	we.
Ac.,	<i>ngan</i> ,	me.	<i>lam</i> ,	us two.	<i>nam</i> ,	us.
Caus.,	<i>ngati</i> ,	by me.	<i>ngel</i> ,	by us two.	<i>ngurn</i> ,	by us.

SINGULAR.			DUAL.		PLURAL.	
Nom.,	<i>nginte</i> ,	thou.	<i>ngurl</i> ,	you two.	<i>ngun</i> ,	you.
Ac.,	<i>ngum</i> ,	thee.	<i>lom</i> ,	you two.	<i>nom</i> ,	you.
Voc.,	<i>nginta</i> ,	O thou.	<i>ngurla</i> ,	O you two.	<i>nguna</i> ,	O you.
Caus.,	<i>ngitte</i> ,	by thee.	<i>ngurl</i> ,	by you two.	<i>ngun</i> ,	by you.

SINGULAR.			DUAL.		PLURAL.	
Nom.,	<i>kitye</i> ,	he, she, it.	<i>keugk</i> ,	they two.	<i>kar</i> ,	they.
Ac.,	<i>kin</i> ,	him.	<i>keuggun</i> ,	they two.	<i>kan</i> ,	them.
Caus.,	<i>kil</i> ,	by him.	<i>keugk</i> ,	by them two.	<i>kar</i> ,	by them.

Personal pronouns are also used in an abbreviated form for the sake of euphony as affixes to nouns. The following is the commonly-used short and euphonised form.

SINGULAR.			DUAL.		PLURAL.	
Nom.,	<i>ap p</i> ,	I.	<i>angal</i> ,	we two.	<i>arn</i> ,	we.
Ac.,	<i>an</i> ,	me.	<i>alam</i> ,	us two.	<i>anam</i> ,	us.
Caus.,	<i>atte</i> ,	by me.	<i>angal</i> ,	by us two.	<i>arn</i> ,	by us.

SINGULAR.			DUAL.		PLURAL.	
Nom.,	<i>ind</i> , <i>inde</i> ,	thou.	<i>ungul</i> ,	you two.	<i>ungune</i> ,	you.
Ac.,	<i>um</i> ,	thee.	<i>olom</i> ,	you two.	<i>onom</i> ,	you.
Voc.,	<i>inda</i> ,	O thou.	<i>ula</i> ,	O you two.	<i>una</i> ,	O you.
Caus.,	<i>inde</i> ,	by thee	<i>ungul</i> ,	by you two.	<i>ungune</i> ,	by you.

SINGULAR.			DUAL.		PLURAL.	
Nom.,	<i>itye atye</i> ,	he, she, it.	<i>engk</i> ,	they two.	<i>ar</i> ,	they.
Ac.,	<i>in ityan ian</i> ,	him.	<i>enggun</i> ,	they two.	<i>an</i> ,	them.
Caus.,	<i>il ile</i> ,	by him.	<i>engk</i> ,	by them two.	<i>ar</i> ,	by them.

The genitives, datives, and ablatives of pronouns are framed by adding the following words to their respective accusatives.

Genitives, *amve*, *amveirle*.
 Datives, *angk*, *ungai*, *anyir*.
 Ablative, *anyir*.

The following is the declension of the pronominal adjective *kinawe*, "of him" or "his":

SINGULAR.		
Nom.,	<i>Kinawe</i> ,	his.
Gen.,	<i>Kinanyerald</i> ,	of his.

Da.,	<i>Kinanyerangk,</i>	to his.
Ac.,	<i>Kinauwe,</i>	his.
Ab.,	<i>Kinanyeril,</i>	by his.
DUAL.		
Nom.,	<i>Kenggunauwurle,</i>	theirs, two.
Gen.,	<i>Kenggunanyirald,</i>	of theirs.
Da.,	<i>Kenggunanyirangk,</i>	to theirs.
Ac.,	<i>Kenggunauwe,</i>	theirs.
Ab.,	<i>Kenggunanyiril,</i>	by their.
PLURAL.		
Nom.,	<i>Kanauwe,</i>	theirs.
Gen.,	<i>Kananyirald,</i>	of their.
Da.,	<i>Kananyirenggun,</i>	to their.
Ac.,	<i>Kanauwe,</i>	their.
Ab.,	<i>Kananyiril,</i>	by their.

The interrogatives "who" and "what" are thus declined :

<i>Ngangge,</i>	who.
<i>Nak,</i>	to whom.
<i>Nak an angk,</i>	to whom (plural).
<i>Nauwe,</i>	} whose, or of whom.
<i>Nauwurle,</i>	
<i>Ngande,</i>	by whom.
<i>Nambe,</i>	for whom.

Minye, "what".

<i>Minye,</i>	what.
<i>Mek,</i>	to what.
<i>Mek,</i>	of what.
<i>Mengye,</i>	by what (how).
<i>Mekimbe,</i>	for what (what for).
<i>Minyandai,</i>	what times (how often).
<i>Minyurti,</i>	what sort.
<i>Minyai, Munyarai,</i>	what number.
<i>Minde,</i>	what reason, why.
<i>Murel,</i>	with what intention.

5. The roots of verbs are always *two* or *three* consonantal sounds, with *one* or *two* vowel sounds. The moods and tenses are formed by particles joined to the roots. The only verbs which are exceptions to the first rule are compound verbs. The words composing them strictly adhere to the rule.

Example of the verb *Lak*, "to spear".

Root.	<i>Lak,</i>	spear, pierce.
Present.	<i>Lakkin,</i>	spearing.
Subjunctive and Potential.	<i>Lak al,</i>	let him spear.
Imperative.	<i>Lak our,</i>	I spear thee or ye.
Perfect.	<i>Lak emb,</i>	having speared, or was spearing.
Past.	<i>Lakkir,</i>	has been spearing.
Future.	<i>Lakkani,</i>	about to spear.
Past participle.	<i>Laggelin,</i>	speared.
	<i>Lak uramb</i>	for the purpose of spearing.
	<i>Lak ilde,</i>	ought to spear.
	<i>Laki,</i>	spear not.

EXAMPLES.

<i>Pettin ile yan,</i>	by him stealing it, he steals it.
<i>Pet al yan,</i>	let him steal it.
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Da.	Kornungar,	to men.
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4. Pronouns are declined in the singular, dual, and plural. The following is the declension of the personal pronouns.

SINGULAR.			FIRST PERSON.		PLURAL.	
Nom.,	ngape,	I.	ngel,	we two.	ngurn,	we.
Ac.,	ngan,	me.	lam,	us two.	nam,	us.
Caus.,	ngati,	by me.	ngel,	by us two.	ngurn,	by us.

SINGULAR.			SECOND PERSON.		PLURAL.	
Nom.,	nginte,	thou.	ngurl,	you two.	ngun,	you.
Ac.,	ngum,	thee.	lom,	you two.	nom,	you.
Voc.,	nginta,	O thou.	ngurla,	O you two.	nguna,	O you.
Caus.,	ngitte,	by thee.	ngurl,	by you two.	ngun,	by you.

SINGULAR.			THIRD PERSON.		PLURAL.	
Nom.,	kitye,	he, she, it.	keugk,	they two.	kar,	they.
Ac.,	kin,	him.	keuggun,	they two.	kan,	them.
Caus.,	kil,	by him.	keugk,	by them two.	kar,	by them.

Personal pronouns are also used in an abbreviated form for the sake of euphony as affixes to nouns. The following is the commonly-used short and euphonised form.

SINGULAR.			FIRST PERSON.		PLURAL.	
Nom.,	ap p,	I.	angal,	we two.	arn,	we.
Ac.,	an,	me.	alam,	us two.	anam,	us.
Caus.,	atte,	by me.	angal,	by us two.	arn,	by us.

SINGULAR.			SECOND PERSON.		PLURAL.	
Nom.,	ind, inde,	thou.	ungul,	you two.	ungune,	you.
Ac.,	um,	thee.	olom,	you two.	onom,	you.
Voc.,	inda,	O thou.	ula,	O you two.	una,	O you.
Caus.,	inde,	by thee	ungul,	by you two.	ungune,	by you.

SINGULAR.			THIRD PERSON.		PLURAL.	
Nom.,	itye atye,	he, she, it.	engk,	they two.	ar,	they.
Ac.,	in ityan ian,	him.	enggun,	they two.	an,	them.
Caus.,	il ile,	by him.	engk,	by them two.	ar,	by them.

The genitives, datives, and ablatives of pronouns are framed by adding the following words to their respective accusatives.

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Gen.,	Kinanyerald,	of his.

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Ab.,	<i>Kinanyeril,</i>	by his.
DUAL.		
Nom.,	<i>Kenggunauwurle,</i>	theirs, two.
Gen.,	<i>Kenggunanyirald,</i>	of theirs.
Da.,	<i>Kenggunanyirangk,</i>	to theirs.
Ac.,	<i>Kenggunauwe,</i>	theirs.
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<i>Nawue,</i>	whose, or of whom.
<i>Nauwurle,</i>	
<i>Ngande,</i>	by whom.
<i>Namde,</i>	for whom.
Minye, "what".	
<i>Minye,</i>	what.
<i>Mek,</i>	to what.
<i>Mek,</i>	of what.
<i>Mengye,</i>	by what (how).
<i>Mekimbe,</i>	for what (what for).
<i>Minyandai,</i>	what times (how often).
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5. The roots of verbs are always *two* or *three* consonantal sounds, with *one* or *two* vowel sounds. The moods and tenses are formed by particles joined to the roots. The only verbs which are exceptions to the first rule are compound verbs. The words composing them strictly adhere to the rule.

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	<i>Laki,</i>	spear not.

EXAMPLES.

<i>Pettin ile yan,</i>	by him stealing it, he steals it.
<i>Pet al yan,</i>	let him steal it.
<i>Pet al um ityan,</i>	let you steal it.

Pet our ityan,
Kile yan petemb,
Pet emb ile yan ngak,
Kile yan pettir,
Ngurte yan pettin,
Ngurte en angk pet ilds,

must steal it.
 he did steal it.
 he very near did steal it.
 by him it was stolen.
 you are stealing it.
 you ought to steal.

I chose the word *pettin* because it exhibits all the peculiarities of the verb.

6. Of the words *el* and *ellin*. *El* appears to mean intention for or towards, whether that intention be for doing or having; *ellin* expresses the intention satisfied; thus:

El, wish to do.

El, wish for.
El, will be.

Ellin, doing.
Ellir, done.
Ellani, will do.
Ellin, having.
Ellin, being.
Ellani, about to be.
Ellir, has been.

Ellin is the nearest word to our word "is" in the language. The words *el* and *ellin* are used in all the above senses, and only by the connection can we tell which.

7. Some examples of sentences in the Narrinyeri language.

Luk ap atye ellir, I did so.
 So I it did.

Ngate yan ellani, I will do it.
 By me it will be done.

Kuny itye ellir, He is dead.
 Enough he has been.

Lald an an nguk perk an mant, Fetch me water from the well.
 Up it me water well it from.

Ngape yaral an preppani wunyel atte yultun an angkngruwar narrinyeri,
 I when me will be lifted up then will by me drawing me to all men.
 I, if I be lifted up, will draw all men unto me.

Ak an angk pinyatowe tyitye ald amb, Give me sugar for the rice.
 Here me to sugar rice of for.

Kok in oura, Put it here.
 Now here it must be.

Yare m atye mitye, What is your name?
 What your it name.

8. The language abounds with ellipsis, and the principal difficulty in learning it arises from elliptical expressions.

THE LORD'S PRAYER, IN LANGUAGE OF THE NARRINYERI.

Ngaiyeri anam, lewin inde wyirreware. Ungunuk urn yarnin umauwe mitye turlin urn. Umauwe kingdom tyiwewar our itye punt. Ngruwar ruwungai um our kung, ungunuk inde an taiyani, luk ennin narar wyirreungai. Pemp our ind arn krepowe hikkai nungge. Tainpul our inde ungunuk arn wirrangwarrin luk ennin arn tainpulun ungunuk ar kornar wirrangwarrin arnangk. Nowaiy inde arnan waiyani yangi ar wirrangar rampaulun arnan wirrangwarrin. Moerpun inde arnan wun yarn nowaiy wirrangwarrin. Nginte ellin governorowe, piltengi, klartin, kaldowamp. Amen.



COMPARATIVE

ENGLISH.	MORETON BAY.	MURRAY RIVER, ECHUCA, AND SWAN HILL.	MAROURA TRIBE, LOWER DARLING.	BULLO CREEK AND NORTH OF DARLING, AND WARREGO.	BLANCHEWATER AND LAKE PANDO, SOUTH AUSTRALIA.	LAKE KOPPERAMANA, SOUTH AUSTRALIA.	NAMMOI, BARWON, LIVERPOOL PLAINS, (KAMILAROI).
1. Sun.	Bigge.	Yongga.	Thuko.	Thummuyerloo, Tuni.	Undo Deachy.	Dityi.	Yaria-Yuroka.
2. Moon.	Bobbin.	Yonggadyr.	Pito.	Mirrican, Kein.	Peterle Dercy.	Pirra.	Gille.
3. Star.	Miriyam.	Toota.	Burle.	Litchia, Merin.	Burtle Dercey.	Ditya wakawaka.	Mirri.
4. Cloud.	Yurru.	.....	Mullara.	.....	.....	Tallara.	Gundar-Yuro.
5. Heavens.	Biram.	Tyrilly.	Ninder.	Kokipijera (storm).	Owey.	Trellawe.	Yuro, Kolibari.
6. Rain.	Turramturram.	Kokora.	Mockra.	.....	Udlantyo.	Tallara Guttana.	Yuro, Kolibari.
7. Heat.	Urun.	.....	Bokara.	.....	Handya Popalla.	Woodralli.	Kuduaalina.
8. Cold.	Tantan.	.....	Kolyer.	.....	.....	Gilpalli.	Karil.
9. Hill.	Bibba.	Poorp.	Totolar.	Thockyar.	Yerta.	Mitta.*	Taiyul.
10. Land.	Ta.	Thungy.	Pomponderoo.	Miyer.	Undka.	Dako.	Taon.
11. Sand.	Goyarra.	.....	Kurrin.	.....	Hanya.	Marda.	Kumbogan.
12. Stone.	Mullo.	.....	Yernda.	Napa-Nopa.	Owey.	Ngapa-Ouy (aui).	Yurul.
13. Water.	Kung.	Kayannie.	Nukou.	.....	Panda (lake) Sulta.	Appa* Kaldri (salt water).	Kolle.
14. Sea.	Bagan.	.....	.....	.....	Wirra.	Battara.	Tulu.
15. Tree.	Gira.	Pyala.	Pimpa.	.....	.....	.....	.....
16. Canoe.	Gondol.	.....	Pultera.	.....	Wiara.	Paroo Gania.*	Guiya.
17. Fish.	Murang.	.....	Burndo.	Warri-Kundal.	Wilka Kintala.	Gintala Wilka.	Buruma.
18. Dog.	Miga.	Bokka.	Kaddele.	Koolar.	Urtloa.	Tyukaro Nanto.*	Bindar.
19. Kangaroo.	.....	Kyema.	Bullula.	Wu.	Picho.	Tooroo.	Wi.
20. Fire.	Dalo.	Pitja.	Nandale.	Thulloo-Nurrul.	Wili.	Boonga.	Kundi.
21. House.	Goannar.	.....	Bonja.	.....	Wadlarty.	Wankalde Kalde.	Pilar.
22. Spear.	Kana.	Kaama.	Karkaro.	.....	.....	.....	Murula-Pundi.
23. Club.	Dabberi.	.....	Pera.	.....	.....	.....	.....
24. Wommera.	.....	Yova.	Yarrum.	Mulla Murrle.	Wadna.	.....	Burran.
25. Boomerang.	.....	Wanya.	Yarrumba.	Warroo.	Wilcha.	Karrari.*	Yerada.
26. Day.	Dirdi.	Kwaky.	Karraninke.	Bestaner.	Yaltunggoung.	Tinkandri Tonkana.*	.....
27. Night.	Wohn.	.....	Thonku.	Mundill.	Wintrena.	.....	Burul.
28. Great.	Winvar.	.....	Komla.	Battur.	Yakerty.	Wacka wacka.	Kai-Kaidul.
29. Small.	Pirpirbin.	.....	Katwaillo.	.....	Yantara.	Tantara Ormou.*	Murruba.
30. Good.	Gallang.	Thoma-Tulko.	Kandelka.	.....	Bearding.	Moodlantye Mallanki.*	Kagil.
31. Bad.	Warrang.	Adjemot-Waiknoo.	Thulaja.	Naroa Mine.	Mirna.	Karnally, Karne.	Giwar.
32. Man.	Marila.	Yenben-Guala.	Malie.	Willawatta Thuyin.	Urtoa.	Willa.	Tinar.
33. Woman.	Dundaldyn.	Pyabea.	Nonjo.	Mutto.	Mumbrina.	Kuba.	Birri.
34. Boy.	Ngarring.	.....	Nonjo.	Whitkitha.	Urtawappa.	Mankara.	Mie.
35. Girl.	Mirung.	.....	Motepa.	.....	Bapina.	Ngaperi.	Buba.
36. Father.	Bing.	Mamook.	Kanbea.	.....	Kinena.	Ngandri.	Ngumba.
37. Mother.	Buddang.	.....	Namarale.	.....	.....	.....	.....
38. Husband.	.....	.....	Murta.	.....	.....	.....	.....
39. Wife.	.....	.....	Nongoma.	.....	.....	.....	.....
40. Head.	Magul.	Boko.	Thurto-Kokori.	Koonkaer.	Paperty.	Mangathandra.	Kaoga.
41. Mouth.	Tambur.	Worru.	Yelka.	Mumnurah.	Liya Moodla.	Monna mimmy.	.....
42. Hand.	Yamma (arm).	Peean.	Murra-Mambuya.	Murra.	Murra.	Marra.	Murra.
43. Eye.	Millo.	Maa.	Makie.	Monoroo.	Minna.	Milki.	Mil.
44. Tongue.	Tallaim.	Saleng.	Tarlina.	Teeyir-Tarlina.	Yarley Tarlya.	Tally.	Tully.
45. Teeth.	.....	Tirra.	.....	Tuyali, Durali.	.....	Manatandra.	.....
46. Ear.	.....	.....	.....	Thina.	.....	Gootara.	.....
47. Foot.	.....	Jenna.	.....	Mintchii.	.....	.....	.....
48. Nose.	.....	Kow.	.....	.....	.....	Moodla.	.....
49. Hair.	.....	Minding.	.....	.....	.....	Parra.	.....
50. Blood.	Kakke.	Gena Gerra.	Kandara.	.....	Herty.	Kumarri.	Gue.
51. Living.	Tikki.	.....	Borrinyer.	.....	Moierga.	.....	.....
52. Dying.	Boang.	.....	Puka Mala.	Pulliner.	Yantatra.	Pallina.	Baluni.
53. Hearing.	Pidne.	.....	Barra (I hear nato).	.....	Yanta.	Ngarrana.*	Winungi.
54. Seeing.	Nganka.	.....	Winje ate (indications)	.....	Yanta.	Minna.	Ngummi.
55. Sitting.	Andowaeh.	.....	Nangalla.	.....	.....	.....	Ngubela ngudela.
56. Making.	Gaehngao.	.....	Bunnener.	.....	Odinda.	Ngammana.	Yurbi.
57. Giving.	Anowah.	Woga.	Gnoka.	Warrina.	Noonkookia.	Yinkani Ingea.*	Wune.
58. I.	Atta.	Wirwy.	Napa.	.....	Niankunda.	Nganno (me), atto (I).*	Ngia.
59. Thou.	Inta.	Guinma.	Nindoah Nuba.	.....	.....	Yinkarni (yours).	Nginda.
60. He, she, it.	Ungda.	Nunthy.	.....	.....	.....	Noolia.	Ngenna.
61. We.	Nhamba.	Gnally-Gueletcho.	Ninnower.	.....	Emue-Warraty.	Yourana.*	Ngane.
62. Ye.	Nuba.	.....	Kinner.	.....	.....	.....	Ngindai.
63. They.	Nganna.	.....	Kakee.	.....	.....	.....	Ngarma.
64. This.	.....	.....	Yeatoura.	.....	.....	.....	Ngubbo-numma.
65. Who.	.....	.....	Nukee.	.....	.....	Warreno.	Andi.
66. One.	Kalun.	Enea.	Barkolo.	Tarlina.	.....	Ngerna.	Mal.
67. Two.	Bullae.	Petcheval.	Barkolo.	Barkalo.	.....	Mondroo.	Bular.
		Petchevalene.	Barkolo nuke.	Tarlina Barkolo.	.....	Barkooloo.	Guliba.

THE TABLE OF THE LANGUAGES OF THE AUSTRALIAN ABORIGINES, COMPILED BY THE REV. GEORGE TAPLIN, PO

QUEENSLAND, MORETON BAY TO WIDE BAY, (DIPPIE).	NEW SOUTH WALES, LAKE MAC- QUARIE.	NEAR MELBOURNE, VICTORIA, MORT NOULAR.	WIMMERA, VICTORIA.	NARRINYERI TRIBES, LAKE ALEX- ANDRINA, SOUTH AUSTRALIA.	ADELAIDE TRIBE, SOUTH AUSTRALIA.	MOORUNDEE, RIVER MURRAY, SOUTH AUSTRALIA.	PARNKALLA, PORT LINCOLN, SOUTH AUSTRALIA.	KING GEORGE'S SOUND, WESTERN AUSTRALIA.
.....	Punnul.	Ngerwein.	Nyauwe.	Nungge.	Tindo.	Nangke.	Yurno.	Djdat.
.....	Yellena.	Myncam.	Mityan.	Marken.	Kakina-Piki.	Kakur Kagur.	Pirra.	Miah Miki.
.....	Munne.	Topyrum.	Turt.	Tulde.	Purle.	Pedli.	.....	Tiendi Ngangor.
Mirrin.	.....	Lark.	Danbill.	Tuppathauwe.	Makko.	Ngerneke.	Mabingi Malko.	Kundart.
.....	Moroko.	Woorwoorr.	Mairn.	Wyrrewarre.	Karro.	.....	Pandari, Ilkari.	Gudjyt Barrab.
Yurung.	.....	Parnmin.	Mityak.	Parnar.	Kuntoro.	Bukatarru.	Wirra.	Iidi.
.....	Karrol.	Nummunin.	Katye.	Walde.	Gadlagadlando.	Woutte.	Pai alla.	Kallarak.
Waikerdumai.	Kurkur.	Kabbin.	Purpuck.	Murunkun.	Manyu.	Taako.	Minyara.	Mulgan Naggaman.
Bukkan.	.....	Bunmill.	Martmat.	Ngurle.	Karnu.	Topko.	Purri.	Katta.
Gerai.	.....	Beek.	Tyer.	Ruwe.	Yerta.	Ruo.	Yerta Yurra.	Budjor.
Kitta.	.....	Kargaruk.	Kurrak.	Toone.	Worra.	Pudlpo.	Walba.	Goyarra.
Kong.	.....	Langmong.	Kotyap.	Marte.	Pure.	Parlko.	Kanya.	Buyi.
.....	Bato, Kokoin.	Parn.	Katyin.	Nguk-Barekar.	Kauwe.	Ngukko.	Kapi, Kano.	Kypi, Yemat, Kowin.
.....	Wombul.	Warreen.	Kor.	Yarlwar.	Yerlo.	Terlungo.	Wortanna.	Mammat.
.....	Kollai.	Kulk, Turring.	Kalk.	Lamatyeri.	Wirra.	Perru.	Idla.	Burnu.
.....	Nanwai.	Wyebokeoron.	Yunkin.	Meralte.	.....	Manno.	Karnkurtu.	.....
Billa.	Makoro.	Tuat.	Wirrap.	Mami.	Parndo.	Kuyongo.	Kaya.	Bi.
Wutta.	.....	Werunnun.	Kale.	Wanbi-Keli.	Kadli.	Kellu.	Kurdinni.	Durdd.
Kroman.	.....	Kooim.	Minyun.	Wangami.	Nante.	Purroilko.	Warru.	Yangor.
Gira.	Koiyung.	Weing.	Wanyap.	Keni.	Gadla.	Kappangko.	Gadla.	Kalla.
Durabunnu.	Kokeri.	Willam, Miam Neerim.	Lar.	Manti.	Wodli.	Rap.	Karnko.	Mya.
Kunnai.	Tura.	Tarre.	Naripal.	Yarndi Kaiki.	Kaya.	Kaiyur.	Kaya.	Gidji.
.....	.....	Kalk Kalk.	Lianwill.	Kanaki.	Katta.	Nakko.	Katta.	Dowak Wirba.
.....	Wommurrur.	.....	Karrick.	Taralye.	Midla.	Ngeweangko.	Midla.	Miro.
.....	.....	.....	Kertum.	Panketye.	.....	.....	.....	Kyli.
.....	Purreung.	Yellawa.	Kehla Nyauwe.	Nunggi.	Tindo.	Nort.	Wallira Marka.	Gedala.
.....	Tokoi.	Borun.	Purroin.	Yonguldyi.	Ngulti.	Nimmi.	Malti.	Kattik.
Winwar.	Kauwul.	Bullito.	Kurrung.	Grauw.	Parto.	Yernko, Worpippi.	Manna.	Ngomon.
Dummai.	Wareu.	Wyebo.	Barn.	Muralappi.	Kutyu.	Poilyongko.	Perru.	Kardidi Batdoin.
Gilanggur.	Murrai.	Boondup Marnameek.	Dealk.	Nunkeri.	Marni.	Midlaityo, Mendilpa.	Marniti.	Gwabba.
Yurag.	Yarakai.	Nillam.	Yatye.	Wirrangi, Brupi.	Wakkina.	Payu.	Milla, Nangka.	Waukyn Warra.
Winyagun.	Kare.	Koolin.	Watye.	Korni.	Meyu.	Meru.	Yura.	Mammarap.
Yirum.	Nukung.	Bagrook.	Lirok.	Mimine.	Tukkupurka Ngammamityu.	Ngammamityu.	Ngammamityu.	Yago.
Birwain.	Yinai.	Bopup.	Kolkon.	Ngauwire Tyinyeri.	Tinyara Kurkurra.	Wityarrong, Pipireyu.	Mambama Marralye.	Turnit.
.....	Murrakeen.	Monmondik.	Lamangurk.	Bami.	Mankarra.	Warkarran, Ngulpo.	Kardni.	Idudar Bungarn.
Bobbin.	Biungbai.	Marman.	Mahmak.	Ngaiyeri.	Yerlimeyir.	Ngukkuwar, Petuwurra.	Pappi.	Kynkar.
Ngavang.	.....	Parpun.	Babuk.	Ninkowe.	Ngankimeyir.	Ngakur, Ngauwur.	Ngamm.	Ngangan.
.....	.....	Nangoron.	Namtuk.	Napi.	Yerlina.	Pewi.	Yerli.	Kardo.
.....	.....	Brenbun.	Matyimuk.	Napi.	Karto.	Loangko.	Karteti.	Kardo.
Kanr.	Wollung.	Kowan Worangatha.	Purpuk.	Kurli.	Mukarta.	Pertpukko.	Kakka.	Katta.
Tunka.	.....	Kundemer Myrongatha.	Tyarbuk.	Tori.	Ta.	Muuno-Taako.	Narparta.	Dta.
Duruin.	Muttura.	Munung.	Mannanyuk.	Mari.	Marra.	Mannuruko.	Marra.	Marhra.
Mi.	Ngaikung.	Myng, Myrongatha.	Mirr.	Pili.	Mena.	Korlo.	Mena.	Kanbigur Mel.
Dunnum.	Tullun.	Tallon.	Tyalli.	Tallangi.	Tadlanya.	Ngantudli.	Yarli.	Dtakundyl.
.....	.....	Leeang.	.....	Turar.	.....	Ngentka.	N.	Nalگو.
.....	Ngureung.	Werring.	.....	Plombi.	.....	Marlo.	.....	Tonga, Jija.
.....	.....	Tenan.	.....	Turni.	.....	Tudnai.	.....	Jinna.
.....	.....	Gaarn.	.....	Kopi.	.....	Roanko.	.....	Mulya.
.....	.....	Yarra.	.....	Kuri.	.....	Yengku.	.....	Kattamangara.
Kukki.	.....	Kulmul.	Gurkuk.	Kruwi.	Karro.	Kantur.	Kartintye.	Barru.
.....	Moron.	Weagoon Murnbull.	Murrin.	Tumbewallin.	Purrutendi.	Ngengin, Mangunko.	Warririti.	Wining.
.....	.....	Weagolameit.	Weekin.	Pornun.	Madlendi.	Puintyun.	Madleannitti Makarnitti.	Wanni.
.....	.....	Nargoneit.	Narrangi.	Kungun.	Yurrekeityandai.	Tammun.	Yurrukkutu Yarriti.	Kattidj.
Nunyin.	Nakilli.	Ngarneit.	Nakelang.	Nakkin.	Nakkondi.	Noan.	Nakkutu.	Nyangow.
Ninnai.	.....	Allambee.	Neanga.	Lewin.	Tinkandi.	Woimangko.	Ikkata.	Nginnow.
Yunka.	Umanbang.	Monkeit.	Kunga.	Winmin.	Pingyandi.	Kawun.	Wappiti Milliti.	Wyerow.
Wa.	Nguwa.	Eumaraleek.	.....	Pempin.	Yunggondi.	Ngun.	Nungkutu.	Yonga.
Ngai.	Bang, Ngatoa.	Murrumbek.	Tyurwik.	Ngap.	Ngai.	Ngape.	Ngel.	Adjo, Ygo.
Nginna.	Ngintoa.	Murrumbinner Kargee.	Tyurmin.	Nginte.	Ninna.	Ngurei.	Ninna.	Nginni.
Unda.	Ninwoa.	Munniger.	Kinga.	Kitye.	Pa.	Ninni.	Panna.	Bal.
.....	Ngeen.	Murramanep.	Tyurmeangorak.	Ngurn.	Ngadlu.	Ngennu.	Ngarrinyelbo.	Ngalata, Ngillel.
Ngindai.	Nura.	Murrumbinner.	Tyarmorak.	Ngun.	Na.	Ngunnu.	Nyurall.	Nyurang.
.....	Bara.	Murrumnüller.	Kinyet.	Kar.	Parna.	Naua.	Yardna.	Balgun Bullalel.
.....	Inna.	.....	Kinma.	Hakkai.	Inna.	Tii.	Inna.	Nidja.
.....	Ngan.	.....	Winyer.	Nganggo.	Nganna.	Merke.	Nganna.	Ngan, Indi.
.....	.....	Gamboden.	Keyap.	Yammalaitye.	Kuma.	Metatta.	Kubmanna Kuma.	Dombart.
.....	.....	Bengero.	Polliit.	Ninkaiengk.	Purlaitye.	Tangkul.	Kalbelli, Kattara.	Gurdar.
.....	Ngoro.	Bengeroganmel.	Polliit Kepan.	Neppalder.	Marnkutye.	.....	.....	.....

THE LANGUAGES OF THE AUSTRALIAN ABORIGINES, COMPILED BY THE REV. GEORGE TAPLIN, POINT MACLEAY,

OUTH ES, MAC- LEAY.	NEAR MELBOURNE, VICTORIA, MORT NOULAR.	WIMMERA, VICTORIA.	NARBINYERI TRIBES, LAKE ALEX- ANDRINA, SOUTH AUSTRALIA.	ADELAIDE TRIBE, SOUTH AUSTRALIA.	MOORUNDEE, RIVER MURRAY, SOUTH AUSTRALIA.	PARNKALLA, PORT LINCOLN, SOUTH AUSTRALIA.	KING GEORGE'S SOUND, WESTERN AUSTRALIA	SWAN RIVER, WESTERN AUSTRALIA
	Ngerwein. Mynam. Topyrum. Lark. Woorwoort. Parnmin. Nummunin. Kabbin. Bunmill. Beek. Kargaruk. Langmong. Parn. Warreen. Kulk, Turring. Wyebokeoron. Tuat. Werunnun. Kooim. Weing. Willum, Miam Neerim. Tarre. Kalk Kalk.	Nyauwe. Mityan. Turt. Danbill. Mairn. Mityak. Katye. Purpuok. Martmat. Tyer. Kurrak. Kotyap. Katyin. Kor. Kalk. Yunkin. Wirrap. Kale. Minyun. Wanyap. Lar. Naripal. Lianwill. Karriek. Kertum. Kehla Nyauwe. Purroin. Kurrung. Barn. Dealk. Yatie. Watye. Lirok. Kolkon. Lamangurk. Mahmak. Babuk. Namtuk. Matyimak. Purpuk. Tyarbuk. Mannanyuk. Mirr. Tyalli.	Nungge. Marken. Tulde. Tuppathauwe. Wyrrewarre. Parnar. Walde. Murunkun. Ngurle. Ruwe. Toone. Marte. Nguk-Barekar. Yarlwar. Lamatyeri. Meralte. Mami. Wanbi-Keli. Wangami. Keni. Manti. Yarndi Kaiki. Kanak. Taralye. Panketye. Nunggi. Yonguldyi. Grauwi. Muralappi. Nunkeri. Wirrang, Brupi. Korni. Mimine. Ngauwire Tyinyeri. Bami. Ngaiyeri. Ninkowe. Napi. Napi. Kurli. Tori. Mari. Piili. Tallangi. Turar. Plombi. Turni. Kopi. Kuri. Kruwi. Tumbewallin. Pornun. Kungun. Nakkin. Lewin. Winmin. Pempin. Ngap. Nginte. Kitye. Ngurn. Ngun. Kar. Hakkai. Inna. Ngangge. Yammalaitye. Ninkaieng. Neppaldar. Kuk Kik.	Tindo. Kakina-Piki. Purle. Makko. Karro. Kuntoro. Gadlagadlando. Manyu. Karnu. Yerta. Worra. Pure. Kauwe. Yerlo. Wirra. Parndo. Kadli. Nante. Gadla. Wodli. Kaya. Katta. Midla.	Nangke. Kakur Kagur. Pedli. Ngerneke. Bukatarru. Woutte. Taako. Tepko. Ruo. Pudipo. Parlko. Ngukko. Terlungo. Perru. Manno. Kuyongo. Kellu. Purroilko. Kappangko. Rap. Kaiyur. Nakko. Ngeweangko.	Yurno. Pirra. Mabingi Malko. Pandari, Ilkari. Wirra. Pai alla. Minyara. Purri. Yerta Yurra. Walba. Kanya. Kapi, Kano. Wortanna. Idla. Karnkurtu. Kuya. Kurdinini. Warra. Gadla. Karko. Kaya. Katta. Midla. Wallira Marka. Malti. Manna. Perru. Marniti. Milla, Nangka. Yura. Ngammaityu. Mambama Marralyo. Kardni. Pappi. Ngammi. Yerdli. Karteti. Kakka. Narparta. Marra. Mena. Yarli. N. Kartintye. Warririti. Madlennitti Makarnitti. Yurrukkutu Yarriti. Nakkutu. Ikkata. Waimangko. Kawun. Ngun. Ngape. Ngurei. Ninni. Ngennu. Ngunnu. Naua. Tii. Merke. Kubmanna Kuma. Kallbelli, Kattara. Kulbarri.	Djdat. Miah Miki. Tiendi Ngangor. Kundart. Gudjyt Barrab. Iidi. Kallarak. Mulgan Naggaman. Katta. Budjor. Goyarra. Buyi. Kypi, Yemat, Kowin. Mammart. Burnu. Bi. Durd. Yangor. Kalla. Mya. Gidji. Dowak Wirba. Miro. Kyli. Gedala. Kattik. Ngomon. Kardidi Batdoin. Gwabba. Waukyn Warra. Mammara. Yago. Turnit. Idudar Bungarn. Kynkar. Ngangan. Kardo. Kardo. Katta. Dta. Marhra. Kanbigur Mel. Dtakundyl. Nalga. Tonga, Jija. Jinna. Mulya. Kattamangara. Barra. Wining. Wanni. Kattidj. Nyangow. Nginnow. Wyerow. Yonga. Adjo, Ygo. Nginni. Bal. Ngalata, Ngillel. Nyurang. Balgun Bullalel. Nidja. Ngan, Indi. Gyn. Gudjal. Wahrang, Merdyn.	Ngangga. Mega, Miki. Milyarm. Mar. Gudjyt. Jidi. Kallarak, Kallang. Nagga, Nyiddin. Katta. Budjor. Goyarra. Buyi. Kypbi, Gabbi, Djan. Oderm. Burnu. Bi. Durda. Yangor. Kalla. Mya. Gidji. Dowak. Miro. Kyli. Gedala. Kumbardang Myardack. Ngomon. Nyumap, Bottyn. Gwabba. Djul, Warra. Mammara. Yago. Mammal. Mandigara. Mammam. Ngangan. Kardo. Kardo. Katta. Dta. Marhra. Mel. Dtallang. Nalga. Tonga, Jija. Jinna. Mulya. Kattamangara. Nguba. Wining. Wanni. Kattidj. Djinnang. Nginnow. Wyerow. Yonga. Ngadjo. Nginni. Bal. Ngannil. Nyurang. Balgun. Nidja. Nganni. Gyn. Gudjal. Wahrang.

	PORT ESSINGTON, NORTH AUSTRALIA.	POPHAM BAY, NORTH AUSTRALIA	CROKER ISLAND, NORTH AUSTRALIA	VAN DIEMEN GULF, NORTH AUSTRALIA.	MOUNTNORRIS BAY, NORTH AUSTRALIA.	WOOLNER DIALECT, ADELAIDE RIVER, NORTHERN TERRITORY.	CORNU TRIBE, N. OF R. DARLING.
	Mowan. Alli. Argadba.	Moyé. Orana. Wilari.	Muri. Orana. Ularit.	Manitj. Korana. Argadba.	Mowan. Orana. Aramut.	Um-mee. Lo-il-ye. Mo-il-wer (<i>stars</i>).	You-ko. Pra-tella. Poor-li (<i>stars</i>). Mindyah.
	Urpalk (<i>sky</i>). Walmat.	Aloudji (<i>sky</i>). Ainbu.	Aijal (<i>sky</i>). Rawan.	Kono (<i>sky</i>). Walmat.	Wono (<i>sky</i>). Walmat.	Mornee.	
	Anbirik. Onak (<i>earth</i>).	Oloho. Ilbanda (<i>earth</i>).	Murde-ejit. Orad (<i>earth</i>).	Anbirik. Konak (<i>earth</i>).	Wariat, Anbirik. Onak (<i>earth</i>).	Ip-o-que. Lil-ye-wer.	Poort-gé (<i>hot</i>). Pondingella.
	Wariat. Obait. Ungamala. Ojalli.	Aya. Oba. Oridji. Ojena.	Aiain. Obaitj. Ungurgal. Iona.	Kaain. Obaitj. Morgagal. Larolk.	Wariat. Obait. Morala. Mamun.	E-a-ké.	No-ko.
	Yap. Naggi. Alpugi. Ojalli.	Ijawa. Alli. Madbi. Ojena.	Almeju. Alait. Wenjoitj. Iona.	Yap. Naggi. Elpugi. Larolk.	Naggi. Alpugi. Mamun.	Maur-wer (<i>wood</i>). Liyer.	Comballa (<i>large gum trees</i>).
						Lis-tung-er.	Carle. Thirl-ta. Curlah.
						Likoor-ler (<i>tight reed sp.</i>), Meav-wó-wá (<i>barbed sp.</i>), Met-pá-ding-er. [Lóor-we (<i>stone sp.</i>)]	
							Wornah. Murn-ké. Tun-ka. Wirtoo.
	Imuran. Eloitj.	Jimiramira. Langallo.	Widawok. Yeyeko.	Burudburang. Aroitj.			Can-gella.
	Iwala. Wari-comomo. Wararuwanji (<i>a child</i>).	Koala. Ohi. Edpeddo (<i>a child</i>).	Eloin. Alalk (<i>a child</i>).	Poli. Urnin. Oroitj (<i>a child</i>).		Wod-lick-er (<i>no good</i>). Me-ang-en-er (<i>young man</i>). Ween-been-er (<i>heavy w.</i>), Ler-mó-que-ler (<i>light w.</i>)	
						Pép-pee. Ka-dee.	
	Wakbok. Angaikbirig. Anjigi. Ira (<i>eyes</i>).	Iwadi. Jamida. Yalabidji. Jara (<i>eyes</i>).	Wari. Lamaliala. Yeyen. Dala (<i>eyes</i>).	Pogal. Aruarigbirij. Jigi. Ira (<i>eyes</i>).	Ailbawal. Arnaramba. Mamiliri. Ira (<i>eyes</i>).	Mung-éd-na. Mud-lo.	Thirta-walla. Yelka. Murrah.
	Anjigi. Alajjah (<i>ears</i>). Ingalmulbil. Anjinmul. Angbal.	Yatadbidji. Jalamari (<i>ears</i>). Janga. Enna. Jimara.	Yeyen. Lomar (<i>ears</i>). Elod. Jeni. Weya.	Jigi. Kalajah (<i>ears</i>). Aruaroli. Jilmul. Mbal.	Mamiliri. Alajah (<i>ears</i>). Um-mal. Orojilmul. Angbal.	Man-enee. Ma (<i>or See</i>). Wée-ye. Ya. Wal. Um-mal. Wée yehr. Ler-mal-ner. Mum-al-war.	Maki (<i>eyes</i>). Tarra-langi. Mindi. Uré. Tiduah. Mendimullar. Tartar-burike. Carndarah.
						Mer-ma-mer, Mó-ki-ter (<i>dead or death</i>). Wal (<i>to hear</i>). Ma (<i>to see</i>). Lóorl (<i>sit down</i>).	Thurré (<i>sit down</i>).
						Ker-nán-mar (<i>give me</i>). Ung-goín-gee. (Also us.) (See ye.) O-win-gee. (Also his, hers, its.) Ung-goín-gee (us). Ne-tangee (<i>yours</i>). (See he.)	Nooko (<i>give</i>).
						Wong-al-ye. (Also what, which.) Tel-ling-it-er. Tolloiyer.	
	Erad. Nargarik. Nargarikelerad.	Motu. Lawitbari. Lawitbari-motu.	Roka. Orialk. Orialkeraroka.	Warat. Nargarik. Nargilwarat.	Warat. Nargarik. Nargarawarat.		

3. Star.	Miriyau.	Toota.	Burle.	Litchia, Merin.	Peterie Dercey.	Parra.	Gille.	Mirri.
4. Cloud.	Yurru.	Tyrilly.	Mullara.	.....	Burtie Dercey.	Ditya wakawaka.	Mirri.	Gundar-Yuro.
5. Heavens.	Biram.	Kokora.	Ninder.	Kokipijera (storm).	Owey.	Tallara.	Yuro, Kolibari.	Yuro.
6. Rain.	Turrunturum.	.....	Mockra.	.....	Udlantyo.	Trellawe.	Kuduallina.	Waik.
7. Heat.	Urun.	Poorp.	Bokara.	.....	Handya Popalla.	Tallara Guttana.	Karil.	Bukk.
8. Cold.	Tantan.	Thungy.	Kolyer.	Thoekeyar.	Yerta.	Woodralli.	Taiyul.	Gera.
9. Hill.	Bibba.	.....	Totolar.	Miyer.	Dako.	Gilpalli.	Taon.	Kitta.
10. Land.	Ta.	Kayannie.	Pomponderoo.	Napa-Nopa.	Hanya.	Mitta.*	Kumbogan.	Kong.
11. Sand.	Goyarra.	Pyala.	Kurrin.	.....	Owey.	Darda.	Kolle.	.....
12. Stone.	Mullo.	.....	Yernda.	.....	Panda (lake) Sulta.	Ngapa-Ony (aui).	.....	.....
13. Water.	Kung.	.....	Nukou.	.....	Wirra.	Appa* Kaldri (salt water).	Tula.	.....
14. Sea.	Bagan.	.....	.....	.....	.....	Battara.	.....	.....
15. Tree.	Gira.	.....	Pimpa.	.....	Wara.	Paroo Gania.*	Guiya.	.....
16. Canoe.	Gondol.	.....	Pultera.	Warri-Kundal.	Wilka Kintala.	Gintala Wilka.	Buruma.	.....
17. Fish.	Murang.	Bokka.	Burndo.	Koolar.	Urtloa.	Tyukaro Nanto.*	Bindar.	.....
18. Dog.	Miga.	Kyema.	Kaddele.	Wu.	Picho.	Tooroo.	Wi.	.....
19. Kangaroo.	.....	Pitja.	Bullula.	Thullo-Nurral.	Wilka.	Boonga.	Kundi.	.....
20. Fire.	Dalo.	.....	Nandale.	.....	Wadlarty.	Wankalde Kalde.	Pilar.	.....
21. House.	Goannar.	Kaama.	Bonja.	.....	.....	.....	Murula-Pundi.	.....
22. Spear.	Kana.	.....	Karkaro.	.....	Wadna.	.....	.....	.....
23. Club.	Dabberi.	Yova.	Pera.	.....	Wilcha.	Karrari.*	Burran.	.....
24. Wommera.	.....	Wanya.	Yarrum.	Mulla Murrle.	Yaltunggoung.	Tinkandri Tonkana.*	Yerada.	.....
25. Boomerang.	.....	Kwaky.	Yarrumba.	Warroo.	Wintrena.	.....	.....	.....
26. Day.	Dirdi.	.....	Karraninke.	Bestaner.	Yakerty.	Wacka wacka.	Burul.	Winw.
27. Night.	Wohn.	.....	Thonku.	Mundill.	Yantara.	Tantara Ormou.*	Kai-Kaidul.	Dumm.
28. Great.	Winvar.	.....	Komla.	Battur.	Bearding.	Moodlantye Mallanki.*	Murruba.	Gilang.
29. Small.	Pirpirbin.	Thoma-Talko.	Katewaillo.	.....	Mirna.	Karnally, Karne.	Kagil.	Wurra.
30. Good.	Gallang.	Adjemot-Waiknoe.	Kandelka.	Narua Mine.	Urtoa.	Willa.	Giwar.	Winya.
31. Bad.	Warrang.	Yenben-Guala.	Thulaja.	Willawatta Thuyin.	Mumbrina.	Kuba.	Tinar.	Yirum.
32. Man.	Marila.	Pyabea.	Malie.	Whitkitha.	Urtawappa.	Mankara.	Birri.	Birwai.
33. Woman.	Dundaldyn.	.....	Nonjo.	.....	Bapina.	Ngaperi.	Mie.	.....
34. Boy.	Ngarring.	Mamook.	Willanjo.	.....	Kinena.	Ngandri.	Buba.	Bobbin.
35. Girl.	Mirung.	.....	Motepa.	.....	.....	.....	Ngumba.	Ngava.
36. Father.	Bing.	.....	Kanabea.	Koonkaer.	Paperty.	Mangathandra.	.....	.....
37. Mother.	Buddang.	.....	Namarale.	Mumnurah.	Liya Moodla.	Monna mimmy.	Kaoga.	Kanr.
38. Husband.	.....	.....	Murta.	Murra.	Murra.	Marra.	.....	Tunka.
39. Wife.	.....	.....	Nongoma.	Monoroo.	Minna.	Milki.	Murra.	Duruin.
40. Head.	Magul.	Boko.	Thurto-Kokori.	Teeyir-Tarlina.	Yarley Tarlya.	Tally.	Mil.	Mi.
41. Mouth.	Tambur.	Worru.	Yelka.	Tuyali, Durali.	.....	Manatandra.	Tully.	Dunnu.
42. Hand.	Yamma (arm).	Peean.	Murra-Mambuya.	Thina.	.....	Gootara.	.....	.....
43. Eye.	Millo.	Maa.	Makie.	Mintchii.	.....	.....	.....	.....
44. Tongue.	Tallaim.	Saleng.	Tarlina.	.....	Herty.	Moodla.	.....	.....
45. Teeth.	.....	Tirra.	.....	.....	Moierga.	Parra.	.....	.....
46. Ear.	.....	.....	.....	.....	Yantatra.	Kumarri.	Gue.	Kukki.
47. Foot.	.....	Jenna.	Kandara.	.....	Years, Urie.	.....	.....	.....
48. Nose.	.....	Kow.	Borrinyer.	.....	Minna.	Pallina.	Baluni.	.....
49. Hair.	.....	Minding.	Puka Mala.	Pulliner.	.....	Ngarrana.*	Winungi.	.....
50. Blood.	Kakke.	Gena Gerra.	Barra (I hear nato).	.....	Odinda.	Milkala.*	Ngummi.	Nunyn.
51. Living.	Tikki.	.....	Winje ate (Idications)	.....	Noonkookia.	Ngammanna.	Ngubela ngudela.	Ninnai.
52. Dying.	Boang.	.....	Nangalla.	Warrina.	.....	Yinkani Ingea.*	Gimbi.	Yunka.
53. Hearing.	Pidne.	Woga.	Bunnener.	.....	Niankunda.	Nganno (me), atto (I).*	Wune.	Wa.
54. Seeing.	Nganka.	Wirwy.	Gnoka.	.....	.....	Yinkarni (yours).	Ngaia.	Ngai.
55. Sitting.	Andowach.	Guinma.	Napa.	.....	Emue-Warraty.	Noolia.	Nginda.	Nginna.
56. Making.	Gaehngao.	Nunthy.	Nindoah Nuba.	.....	.....	.....	Ngeane.	Unda.
57. Giving.	Anowah.	Gnally-Gueletcho.	Ninnower.	.....	.....	Yourana.*	Ngindai.	Nginda.
58. I.	Atta.	.....	.....	.....	.....	.....	Ngarma.	.....
59. Thou.	Inta.	.....	Kinner.	Tarlina.	.....	.....	Ngubbo-numma.	.....
60. He, she, it.	Ungda.	.....	Kakee.	Barkalo.	.....	Warreno.	Andi.	.....
61. We.	Nhamba.	.....	Yeatoura.	Tarlina Barkolo.	.....	Ngerna.	Mal.	.....
62. Ye.	Nuba.	.....	Nukee.	.....	.....	Mondroo.	Bular.	.....
63. They.	Nganna.	.....	Barkolo.	.....	.....	Barkooloo.	Guliba.	.....
64. This.	.....	.....	Barkolo nuke.	.....	.....	Mondroo Mondroo.	Bular-Balar.	.....
65. Who.	.....	.....	Barkolo barkolo.	.....	.....	.....	.....	.....
66. One.	Kalun.	Enea.	Wowo.	.....	.....	.....	.....	.....
67. Two.	Bullae.	Petcheval.	.....	.....	.....	.....	.....	.....
68. Three.	Buppur.	Petchevalene.	.....	.....	.....	.....	.....	.....
69. Four.	Milling Kalla.	Petcheval petcheval.	.....	.....	.....	.....	.....	.....
70. Dual.	.....	.....	.....	.....	.....	.....	.....	.....
71. Plural.	.....	.....	.....	.....	.....	.....	.....	.....
AUTHORITIES FROM WHICH OBTAINED.		Dr. Turner's "Polynesia".	Messrs. Strutt and Beveridge, "Report of Victorian Legislature".	Mr. R. W. Holden, Poonindie, South Australia.	Mr. R. W. Holden, Poonindie, South Australia.	Mr. B. W. Taplin.	Rev. G. Meissel and Howitt's "Expedition". * are Howitt's "Expedition".	Rev. W. Ridley.
								Rev. W.

	SOUTH AUSTRALIA.				WESTERN AUSTRALIA.			
.....	Yellena.	Ngerwein.	Nyauwe.	Nungge.	Tindo.	Nangko.	Yurno.	Djdat.
.....	Munne.	Yellena.	Mityan.	Marken.	Kakina-Piki.	Kakur Kagur.	Pirra.	Miah Miki.
.....	.....	Toppyrum.	Turt.	Tulde.	Purle.	Pedli.	.....	Tiendi Ngangor.
.....	.....	Lark.	Danbill.	Tuppathauwe.	Makko.	Ngernke.	.....	Kundart.
.....	Moroko.	Woorwoorr.	Mairn.	Wyrrewarre.	Karro.	.....	Mabingi Malko.	Gudjyt Barrab.
.....	.....	Parnmin.	Mityak.	Parnar.	Kuntoro.	Bukatarru.	Pandari, Ilkari.	Idi.
.....	Karrol.	Nummunin.	Katye.	Walde.	Gadlagadlando.	Woutte.	Wirra.	Kallarak.
.....	Kurkur.	Kabbin.	Purpuok.	Murunkun.	Manya.	Taako.	Pai alla.	Mulgan Naggaman.
.....	.....	Bunmill.	Martmat.	Ngurle.	Karnu.	Tepko.	Minyara.	Katta.
.....	Purrai.	Beek.	Tyer.	Kuwe.	Yerta.	Ruo.	Purri.	Budjor.
.....	.....	Kargaruk.	Kurrak.	Toone.	Worra.	Pudlpo.	Yerta Kurra.	Goyarra.
.....	.....	Langmong.	Kotyap.	Marte.	Pure.	Parlko.	Walba.	Buyi.
.....	Bato, Kokoin.	Parn.	Katyin.	Nguk-Barekar.	Kauwe.	Ngukko.	Kanya.	Kapi, Kano.
.....	Wombul.	Warreen.	Kor.	Yarlumar.	Yerlo.	Wortanna.	Kapi, Kano.	Wortanna.
.....	Kollai.	Kulk, Turring.	Kalk.	Lamatyeri.	Wirra.	Perru.	Idla.	Mammart.
.....	Nanwai.	Wyebokeoron.	Yunkin.	Meralte.	.....	Manno.	Karnkurtu.	Burnu.
.....	Makoro.	Tuat.	Wirrap.	Mami.	Parndo.	Kuyongo.	Kuya.	Bi.
.....	.....	Werunnun.	Kale.	Wanbi-Keli.	Kadli.	Kellu.	Kurndinni.	Durdd.
.....	.....	Kooim.	Minyun.	Wangami.	Nante.	Purroilko.	Warru.	Yangor.
.....	Koilyung.	Weing.	Wanyap.	Keni.	Gadla.	Kappangko.	Gadla.	Kalla.
.....	Kokeri.	Willum, Miam Neerim.	Lar.	Manti.	Wodli.	Rap.	Karnko.	Mya.
.....	Tura.	Tarre.	Naripal.	Yarndi Kaiki.	Kaya.	Kaiyur.	Katta.	Gidji.
.....	.....	Kalk Kalk.	Lianwill.	Kanaki.	Katta.	Nakko.	Midla.	Dowak Wirba.
.....	Wommurrur.	.....	Karrick.	Taralye.	Midla.	Ngewangko.	.....	Miro.
.....	.....	.....	Kertum.	Panketye.	.....	.....	.....	Kylo.
.....	Purreung.	Yellawa.	Kehla Nyauwe.	Nunggi.	Tindo.	Nort.	Wallira Marka.	Gedala.
.....	Tokoi.	Borun.	Purroin.	Yonguldyi.	Ngulti.	Nimmi.	Malti.	Kattik.
.....	Kauwul.	Bullito.	Kurrung.	Grauw.	Parto.	Yernko, Worpippi.	Manna.	Ngomon.
.....	Warea.	Wyebo.	Barn.	Muralappi.	Kuty.	Poilyongko.	Perru.	Kardidi Batdoin.
.....	Murrai.	Boondup Marnameek.	Dealk.	Nunkeri.	Marni.	Midlaityo, Mendilpa.	Marniti.	Gwabba.
.....	Yarakai.	Nillam.	Yatye.	Wirangi, Brupi.	Wakkina.	Payu.	Milla, Nangka.	Waukyn Warra.
.....	Kare.	Koolin.	Watye.	Korni.	Meyu.	Meru.	Yura.	Mammurap.
.....	Nukung.	Bagrook.	Lirok.	Mimine.	Tukkupurka Ngammamitya.	Ngammaityu.	Ngammaityu.	Yago.
.....	Yinai.	Bopup.	Kolkon.	Ngauwire Tyinyeri.	Tinyara Kurkurra.	Wityarrong, Pipireyu.	Mambama Marraleye.	Turnit.
.....	Murrakeen.	Monmondik.	Lamangurk.	Bami.	Mankarra.	Warkarran, Ngulpo.	Kardni.	Idudar Bungara.
.....	Biungbai.	Marman.	Mahmak.	Ngaiyeri.	Yerlimeyir.	Ngukkuwar, Petawurra.	Pappi.	Kynkar.
.....	.....	Parpun.	Babuk.	Ninkowe.	Ngankimeyir.	Ngakur, Ngauwur.	Ngammi.	Ngangan.
.....	.....	Nangoron.	Namtuk.	Napi.	Yerlina.	Pewi.	Yerdl.	Kardo.
.....	.....	Brenbun.	Matyimuk.	Napi.	Karto.	Loangko.	Karteti.	Kardo.
.....	Wollung.	Kowan Worangatha.	Purpuk.	Kurli.	Mukarta.	Pertpukko.	Kakka.	Katta.
.....	.....	Kundemer Myrongatha.	Tyarbuk.	Tori.	Ta.	Muuno-Taako.	Narparta.	Dta.
.....	Muttura.	Munung.	Mannanyuk.	Mari.	Marra.	Mannuruko.	Marra.	Marhra.
.....	Ngaukung.	Myng, Myrongatha.	Mirr.	Pili.	Pilla.	Korlo.	Mena.	Kanbigur Mel.
.....	Tullun.	Tallon.	Tyalli.	Tallangi.	Tadlanya.	Ngantudli.	Yarli.	Dtakundyl.
.....	.....	Leeang.	.....	Turur.	.....	Ngentka.	N.	Nalگو.
.....	Ngureung.	Werring.	.....	Plombi.	.....	Marlo.	.....	Tonga, Jija.
.....	.....	Tenan.	.....	Turni.	.....	Tudnai.	.....	Jinna.
.....	.....	Gaarn.	.....	Kopi.	.....	Roonko.	.....	Mulya.
.....	.....	Yarra.	.....	Kuri.	.....	Yengku.	.....	Kattanangara.
.....	.....	Kulmul.	Gurkuk.	Kruwi.	Karro.	Kantur.	Kartintye.	Barru.
.....	Moron.	Weagoon Murmbull.	Murrin.	Tumbewallin.	Purrutendi.	Ngengin, Mangunko.	Warririti.	Wining.
.....	.....	Weagolameit.	Weekin.	Pornun.	Madlendi.	Puimtyun.	Madlepnitti Makarnitti.	Wanni.
.....	.....	Nargoneit.	Narrangi.	Kungun.	Yurrekeityandai.	Tammun.	Yurrukkutu Yarriti.	Kattidj.
.....	Nakilli.	Ngarneit.	Nakelang.	Nakkun.	Nakkondi.	Noan.	Nakkuta.	Nyangow.
.....	.....	Allambee.	Neanga.	Lewin.	Tinkandi.	Waimangko.	Ikkata.	Nginnow.
.....	Umanbang.	Monkeit.	Kunga.	Winmin.	Pingyandi.	Kawun.	Wappiti Milliti.	Wyerow.
.....	Nguwa.	Eumaraleek.	.....	Pempin.	Yunggondi.	Ngun.	Nungkutu.	Yonga.
.....	Bang, Ngatoa.	Murrumbek.	Tyurmik.	Ngap.	Ngai.	Ngape.	Ngai.	Adjo, Ygo.
.....	Ngintoa.	Murrumbinner Kargee.	Tyurmin.	Nginte.	Ninna.	Ngurrei.	Ninna.	Nginni.
.....	Ninwoa.	Munniger.	Kinga.	Kitye.	Pa.	Ninni.	Panna.	Bal.
.....	Ngeen.	Murramaner.	Tyurmeangorak.	Ngurn.	Ngadlu.	Ngennu.	Ngarrinyelbo.	Ngalata, Ngillel.
.....	Nura.	Murrumbinner.	Tyarmorak.	Ngun.	Na.	Ngunnu.	Nuralli.	Nyurang.
.....	Bara.	Murrumnüller.	Kinyet.	Kar.	Parna.	Naua.	Yardna.	Balgun Bullalel.
.....	Inna.	.....	Kinna.	Hakkai.	Inna.	Tii.	Inna.	Nidja.
.....	Ngan.	.....	Winyer.	Ngangge.	Nganna.	Merke.	Nganna.	Ngan, Indi.
.....	.....	Gamboden.	Keyap.	Yammalaitye.	Kuma.	Metatta.	Kubmanna Kuma.	Dombart.
.....	.....	Bengero.	Pollit.	Ninkaieng.	Purlaitye.	Tangkul.	Kalbelli, Kattara.	Gurdar.
.....	Ngoro.	Bengeroganmel.	Pollit Kepap.	Neppaldar.	Marinkuty.	Tangkul meto.	Kulbarri.	Wahrang, Merdyn.
.....	.....	Bengeroo vor bengeroo.	Kuk Kuk.	Kuk Kuk.	Yerra bula.	Naiko.	.....	.....
.....	Buloara.	.....	Engk.	Ar.	Idla urla.	Akul.	Welli.	.....
.....	.....	.....	Itya.	.....	Nna.	A.	Ari.	.....
Rev. W. Ridley.	Rev. L. E. Threlkeld.	Mr. Thomas, Protector of Aborigines, Victoria.	Rev. Mr. Spieseke, Moravian Missionary.	George Taplin, Point Macleay, South Australia.	Vocabulary of Rev. Mr. Teichellman.	Mr. M. Moorhouse, South Australia.	Rev. M. Schurman's Vocabulary.	Mr. G. F. Moore, Advocate-General of Western Australia.

urrol.	Parnmin.	Mityak.	Wynnewarre.	Karro.	Ngerru.	Mabingi Malko.	Kundart.	Mar.
urkur.	Nummunin.	Katy.	Parnar.	Kuntoro.	Bukatarru.	Pandari, Ilkari.	Gudjyt Barrab.	Gudjyt.
urrai.	Kabbin.	Purpuok.	Walde.	Gadlagadlando.	Woutte.	Wirra.	Iidi.	Jidi.
to, Kokoin.	Bunmill.	Martmat.	Murunkun.	Manya.	Taako.	Pai alla.	Kallararak.	Kallararak, Kall
ombul.	Beek.	Tyer.	Ngurle.	Karnu.	Tepko.	Minyara.	Mulgan Naggaman.	Nagga, Nyidd
llai.	Kargaruk.	Kurrak.	Buwe.	Yerta.	Ruo.	Purri.	Katta.	Katta.
nwai.	Langmong.	Kotyap.	Toone.	Worra.	Pudlpo.	Yerta Yurra.	Budjor.	Budjor.
kor.	Parn.	Katyin.	Marte.	Pure.	Parlko.	Walba.	Goyarra.	Goyarra.
.....	Warreen.	Kor.	Nguk-Barekar.	Kauwe.	Ngukko.	Kanya.	Buyi.	Buyi.
.....	Kulk, Turring.	Kalk.	Yarlumar.	Wirra.	Terlungo.	Kapi, Kano.	Kypi, Yemat, Kowin.	Kypbi, Gabbi,
.....	Wyebokeoron.	Yunkin.	Lamatyeri.	.....	Perru.	Wortanna.	Mammart.	Odern.
.....	Tuat.	Wirrap.	Meralte.	Parndo.	Manno.	Idla.	Burnu.	Burnu.
.....	Werunnun.	Kale.	Wanbi-Keli.	Kadli.	Kuyongo.	Karnkurtu.	.....	.....
.....	Kooim.	Minyun.	Wangami.	Nante.	Kellu.	Kuya.	Bi.	Bi.
.....	Weing.	Wanyap.	Keni.	Gadla.	Purroilko.	Kurdninni.	Durdd.	Durda.
.....	Willum, Miam Neerim.	Lar.	Manti.	Wodli.	Kappangko.	Warru.	Yangor.	Yangor.
.....	Tarre.	Naripal.	Yarndi Kaiki.	Kaya.	Rap.	Gadla.	Kalla.	Kalla.
mmurrur.	Kalk Kalk.	Lianwill.	Kanaki.	Katta.	Kaiyur.	Karnko.	Mya.	Mya.
.....	.....	Karrick.	Taralye.	Midla.	Nakko.	Kaya.	Gidji.	Gidji.
.....	.....	Kertum.	Panketye.	.....	Ngeweangko.	Katta.	Dowak Wirba.	Dowak.
.....	.....	Kehle Nyauwe.	Nunggi.	Tindo.	.....	Midla.	Miro.	Miro.
.....	Yellawa.	Purroin.	Yonguldyi.	Ngulti.	Nort.	Wallira Marka.	Kyli.	Kyli.
.....	Borun.	Kurrung.	Grawi.	Parto.	Nimmi.	Malti.	Gedala.	Gedala.
.....	Bullito.	Barn.	Muralappi.	Kuty.	Yenko, Worpippi.	Manna.	Kattik.	Kumbardang
.....	Wyebo.	Dealk.	Nunkeri.	Marni.	Poilyongko.	Perru.	Ngomon.	Ngomon.
.....	Boondup Marnameek.	Yatye.	Wirangi, Brupi.	Wakkina.	Midlaityo, Mendilpa.	Marniti.	Kardidi Batdoin.	Nyumap, Bott
.....	Nillam.	Watye.	Korni.	Meyu.	Payu.	Milla, Nangka.	Gwabba.	Gwabba.
.....	Koolin.	Lirok.	Mimine.	Tukcupurka Ngammamitya.	Meru.	Yura.	Waukyn Warra.	Jjul, Warra.
.....	Bagrook.	Kolkon.	Ngauwire Tyinyeri.	Tinyara Kurkurra.	Ngammaityu.	Ngammaityu.	Mammara.	Mammara.
.....	Bopup.	Lamangurk.	Bami.	Mankarra.	Wityarrong, Pipireyu.	Mambama Marra.	Yago.	Yago.
.....	Monmondik.	Mahmak.	Ngaiyeri.	Yerlimeyir.	Warkarran, Ngulpo.	Kardni.	Turnit.	Mammal.
.....	Marman.	Babuk.	Ninkowe.	Ngankimeyir.	Ngukkuwar, Petuwurra.	Pappi.	Idurad Bungarn.	Mandigara.
.....	Parpun.	Namtuk.	Napi.	Yerlina.	Ngakur, Ngauwur.	Ngammi.	Kynkar.	Mamman.
.....	Nangoron.	Brenbun.	Matyimuk.	Karto.	Pewi.	Yerdli.	Ngangan.	Ngangan.
.....	Werrang.	Purpuk.	Kurli.	Mukarta.	Loangko.	Karteti.	Kardo.	Kardo.
.....	Kundemer Myrongatha.	Tyarbuk.	Tori.	Ta.	Pertpukko.	Kakka.	Katta.	Katta.
.....	Munung.	Mannanyuk.	Mari.	Marra.	Muuno-Taako.	Narparta.	Dta.	Dta.
.....	Myng, Myrongatha.	Mirr.	Pili.	Mannuruko.	Marra.	Marbra.	Marbra.	Marbra.
.....	Tallon.	Tyalli.	Tallangi.	Mena.	Korllo.	Kanbigur Mel.	Mel.	Mel.
.....	Leeang.	.....	Turar.	Tadlanya.	Ngantudli.	Dtakundyl.	Dtakundyl.	Dtakundyl.
.....	Werrang.	.....	Plombi.	.....	Ngentka.	Nalga.	Nalga.	Nalga.
.....	Tenan.	.....	Turni.	.....	Mario.	Tonga, Jija.	Tonga, Jija.	Tonga, Jija.
.....	Gaarn.	.....	Kopi.	.....	Tudnai.	Jinna.	Jinna.	Jinna.
.....	Yarra.	.....	Kuri.	.....	Roonko.	Mulya.	Mulya.	Mulya.
.....	Kulmul.	Gurkuk.	Kruwi.	Karro.	Yengku.	Kattamangara.	Kattamangara.	Kattamangara
.....	Weagoon Murmbull.	Murrin.	Tumbewallin.	Purrutendi.	Kantur.	Barru.	Barru.	Nguba.
.....	Weagolameit.	Weekin.	Pornun.	Madlendi.	Ngengin, Mangunko.	Wining.	Wining.	Wining.
.....	Nargoneit.	Narrangi.	Kungun.	Yurrekeityandai.	Puintyun.	Wanni.	Wanni.	Wanni.
.....	Ngarneit.	Nakelang.	Nakkin.	Nakkondi.	Tammun.	Kattidj.	Kattidj.	Kattidj.
.....	Allambee.	Neanga.	Lewin.	Tinkandi.	Noan.	Nakkutu.	Nyangu.	Djinnang.
.....	Monkeit.	Kunga.	Winmin.	Pingyandi.	Woimangko.	Ikkata.	Nginnow.	Nginnow.
.....	Eumaraleek.	.....	Pempin.	Yunggondi.	Kawun.	Wappiti Milliti.	Wyerow.	Wyerow.
.....	Murrumbeek.	Tyurmik.	Ngap.	Ngai.	Ngun.	Nungkut.	Yonga.	Yonga.
.....	Murrumbinner Kargee.	Tyurmin.	Nginte.	Ninna.	Ngape.	Ngai.	Adjo, Ygo.	Ngadjo.
.....	Munniger.	Kinga.	Kitye.	Pa.	Ngurrai.	Ninna.	Nginni.	Nginni.
.....	Murramaner.	Tyurmeangorak.	Ngurn.	Ngadlu.	Ninni.	Panna.	Bal.	Bal.
.....	Murrumbinner.	Tyarmorak.	Ngun.	Na.	Ngennu.	Ngarrinyelbo.	Ngalata, Ngillel.	Ngannil.

suffixing *lu* to the singular; the Australian dialects by a similar addition of *lu*, *li*, *dlu*, *dli*, etc.

"In this particular some of the dialects of the north-eastern frontier of India exhibit also an agreement with the Telugu: e.g., compare Dhimal *nâ* 'thou', with *nyel*, 'you'. In the Australian dialects I find the following plurals and duals of the pronoun of the first person, 'we', or 'we two', *ngalu*, *ngadlu*, *ngadli*, *ngalata*, etc. Compare this with the manner in which the Telugu forms its plural: e.g., *vad'-u*, 'he'; *vâdlu*, 'they'; and even with the colloquial Tamil plural of the pronoun of the first person: e.g., *nân*, 'I'; *nânggal*, 'we'. The resemblance between the Australian pronouns of the second person, both singular and plural, and those of the Dravidian languages is more distinct and special, and is apparent not only in the suffixes, but in the pronominal base itself. The normal forms of these pronouns in the Dravidian languages are, singular, *nîn*, plural, *nîm*. The personality resides in the crude root, *nî*, 'thou'; which is the same in both numbers, with the addition of a singular formative *n* (e.g., *nî-n*, 'thou'), and a pluralising formative *m* (e.g., *nîm*, 'thous', or 'you'). In some cases the pluralising particle, *m*, has been displaced, and *r*, which I regard as properly the sign of the epicene plural of the third person, has been substituted for it: e.g., *nîr*, 'you' (in Telugu *nîr-u*).

"This abnormal form *nîr* is most used in a separate form; the older and more regular *nîm* retains its place in compounds, and in the imperative of the verb. Whilst *i* is the vowel which is almost invariably found in the singular of the pronoun of the second person, in the plural *i* often gives place to *u*, as in the classical Tamil *numa*, 'your', and the Brahui *num*, 'you'. It is to be noticed also that the modern Canarese has softened *nîm* into *nîvu* or *nîvu*, in the nominative.

"It is singular, in whatever way it may be accounted for, that in each and all of the particulars now mentioned, the Australian dialects resemble the Dravidian. See the following comparative view. Under the Australian head I class the dual together with the plural, as being substantially the same.

DRAVIDIAN.

Thou, *nîn*, *nîn*.
You, *nîm*, *nîm*, *nîr*, *num*, *nîvu*.

AUSTRALIAN.

ninna, *nginne*, *ngintoa*, *nginte*.
nimedoo, *nura*, *nîwa*, *ngurle*.

"Compare also the accusative of the first person singular in Tamil, *ennei*, 'me', with the Australian accusative, *emmo*.

"The grammatical structure of the Australian dialects exhibits a general agreement with the languages of the Scythian group. In the use of post-positions instead of prepositions, in the use of two forms of the first person, plural, one inclusive of the party addressed, the other exclusive(?); in the formation of inceptive,

causative, and reflective verbs by the addition of certain syllables to the root; and, generally, in the agglutinative structure of words and in the position of words in a sentence, the dialects of Australia resemble the Dravidian—as also the Turkish, the Mongolian, and other Scythian languages; and in the same particulars, with one or two exceptions, they differ essentially from the dialects which are called Polynesian.

“The brief vocabularies of the Australian dialects which have been compiled do not appear to give additional confirmation to the resemblances pointed out above; but it is difficult to suppose those resemblances to be unreal, or merely accidental; and it is obvious that the Australian dialects demand (and probably will reward) further examination.”

5. So far Caldwell, and there are certainly reasons which incline us to believe that all these belong to one very extensive class of similarly organised languages. Their chief characteristic appears to be the agglutinative formation of their structure, in which the grammatical relations of the words are generally indicated by suffixes. Prefixes occur but seldom in languages of this class, and the stems of the words are rarely affected by internal flexion. A grammatical gender does not exist in the greater number of these languages, but the nouns are generally declinable in an almost infinite variety of cases.

6. Most of the nations by whom languages of this class are spoken, are addicted to a nomadic manner of life; and when, adopting more settled habits, their speech is even found to lose, to some extent, the distinguishing characteristics of the languages of this class. Professor Max Müller has, therefore, distinguished this class of languages by the name of “nomadic”, and he has very ingeniously shown how the nomadic character of the people who speak them almost necessarily produces great dissimilarities in the external form of the language, affecting the vocabulary, as well as the suffixes by which the same grammatical relations are denoted in dialects closely akin to each other. After all, the outward appearance of a language is everywhere its most insignificant part, on account of the continual changes to which this is necessarily subject.

7. It is difficult to find an appropriate name for this large class of languages; and if we designate them, with Max Müller, by the term “TURANIAN” (in a far wider sense than the word can, strictly speaking, claim), it is only because all other names proposed are liable to still greater objections. “Turanian”, in this wider sense, is used to denote all such languages as appear to be of similar construction to those to which in the first instance the name Turanian was applied.

8. The threefold division of *Mandshu-Mongolian*, *Tatar-Turk-*

ish, and *Finnic-Hungarian* (constituting the *Ural-Altai* family), forms the centre of this wider class of Turanian languages. A West-European branch is formed by the *Euscara* or *Basque* language, spoken on both sides of the Pyrenees. In Africa, the *Mande* dialects (*Vei*, *Mandingo*, *Susu*, *Bambara*, etc.), the *Bornu* language, and probably also that of the *Tibbu* or *Teda*, belong to this class. The *Bornu* language, especially, shows curious points of resemblance to the language of the second style of Cuneiform Inscriptions, which, to whatever nation it may have belonged, must have been of extensive use and great importance throughout Persia.* To the North-West, the Turanian languages appear to have extended themselves over the continent of *America*, where at least a great number of the multifarious tongues exhibit the characteristics of this extensive class of languages.

In Southern Asia, the *Dravidian* languages constitute another branch. They are found not only in Southern India, but detached members of them have also been discovered to the north-west of the peninsula. And further southwards the *Australian* languages, as far as they are known to us, are recognised as belonging to the same class.

9. I have purposely, here, spoken only of a *class*, and not of a *family of Turanian languages*; as although they possess sufficient features in common to justify us in including them under the same head (in the absence of any evidence to the contrary) in a general classification of languages, it cannot be said that the points of resemblance are such as necessarily to constitute a closer affinity. On the contrary, it is not impossible that some or all of these languages exhibit only certain stages of development in one particular direction, taken either by members of different families, or by different branches of the same family.

10. The *genderless* character, which appears at first sight as one of their main characteristics, is only a negative quality which may be a mere consequence of the disappearance of a former grammatical gender; and is certainly to be recognised as such in the Persian language. And the other characteristic of the Turanian languages *viz.*, the use of *suffices and postpositions*, is shared by them with the most primitive stages of the *Sex-denoting family*. The possibility, therefore, offers itself that some, at least, of the so-called Turanian languages may have branched off from the sex-denoting languages at a very early period in the development of the latter, losing the characteristic gender of the nouns, as the Persian has done at a later period.

* The so-called personal pronouns in both languages are entirely the same; and the plural prefix in *Bornu* is identical with that of the cuneiform inscriptions. *Nomina abstracta*, in both languages, are formed by the same prefix, etc. Is this, perhaps, an evidence of Tataric invasions of Africa before the time of Cambyses; or has the reverse been the case?

11. This supposition receives support from the observation of a kindred fact in the history of African languages. Here, as is well known, *South Africa* is full of languages of one family (the *Bantu*), in which the nouns are divided into classes. This classification, although identical in principle with that of the sex-denoting languages, is yet entirely different from it in all its outward features—firstly, in *not* being based upon the representation of the nouns by their suffixes, but by their prefixes; and secondly, by *not* combining the classification of the nouns with any sexual distinctions.

12. Now, it is first to be remarked that many of the languages of the TURANIAN CLASS are either lying between those of the *Sex-denoting family*, or are contiguous to them.

13. As regards the *Dravidian* languages, the characteristic of genderless can by no means be applied to them; on the contrary they have different genders for their pronouns almost in the same way as the English language, and it is not improbable that this grammatical arrangement has descended, as in English, from a classification of the nouns that was originally grammatical and not logical. It does not necessarily follow, on this account, that the *Dravidian* languages belong to the same *Sex-denoting family*, which includes the *Aryan* or *Indo-European*, the *Semitic*, the *Egyptian*, and other *North-African* languages (*Berber*, *Haussa*, *Galla*, etc.), as well as the *Hottentots*. These sex-denoting languages clearly show by the original identity of their signs of gender that they belong to one great family, and we have lately learned that this also includes the *Khasi* or *Cassia* of Lower Assam. But this identity in the forms of the original signs of gender is not as clear in the case of the *Dravidian* languages; and we, therefore, hesitate to ascribe them to the same family. We are in the same doubt with regard to one of the *Oceanic* languages,—that of *Tarawa* (Gilbert or King'smill's Islands), which, according to Mr. H. Hale (United States Exploring Expedition, 4to, New York, 1846, p. 441), is sex-denoting. I have in vain searched throughout the *North American* languages for any which exhibit a sex-denoting character, but it is remarkable that *South America* affords us a number of them, in the *Arawack*, the *Betoi*, *Yaura*, *Moxa*, and the languages of the *Maipures*, and *Abipones*. This is not the place to inquire, by analysis, whether any of the South American languages belong to the same sex-denoting family as that which has received this name *par excellence*. But, in any case, the sex-denoting character can only have arisen in them from a system of Concords, which stamps them unmistakeably as belonging to the larger group of PRO-NOMINAL languages.

14. Similarly, there can be no doubt that the systems of clas-

sifying the nouns, which exist in many *North American* languages, are clear evidences that the languages in which they occur belong also to the PRONOMINAL group. Until it can be proved that the grammatical classification of the nouns arose in a different manner (and there are no evidences discernible to me which tend that way), it must be presumed that here, also, classes, which were originally entirely of a grammatical nature, have been fashioned so as apparently to adapt themselves to logical distinctions, be they such as distinguish male and female, rational and irrational, or animate and inanimate, etc.

15. If a great number of the *American* languages thus bear certain evidences of belonging to the group of PRONOMINAL languages, it may appear very questionable whether there still exist any languages which can be safely excluded from this group. In fact, although a time must have undoubtedly once existed in the formation of language when true pronouns were unknown, it is clear that the possession of true pronouns must give so much additional vitality to a language, and prove so energetic a stimulus in the development of the nations using such languages, that it could not at all be wondered at if they had effectually swept all lower stages of language from the face of the earth.

16. This is a possibility, but it would, as yet, be premature to consider it even as a probability. If, however, it can be proved that the languages now spoken by the races who are lowest in the scale of civilisation, do belong to the PRONOMINAL GROUP, then the probability greatly increases that the lower stages in the development of language (*i.e.*, those preceding the formation of true pronouns) have all ceased to be represented.

17. In this respect, it is particularly important to examine carefully such languages as those of the *Bushmen* in *South Africa*,* of the lowest *American* tribes (those living to the west of the *Rocky Mountains* in *North America*, and the *Fuegians* in *South America*), and also of the *Australian* tribes.

18. As far as I know, for none of these languages has so much reliable material been collected, as for the AUSTRALIAN; and in this respect it is probably more easy to determine their position than that of the other above-mentioned languages.

19. If, as maintained, the relationship of the *Australian* languages to the *Dravidian* holds good, then the existence of a three-fold gender in these latter languages (similar to that in the English language) appears to settle the question. For, in this

* The employment of the process of re-duplication for the purpose of forming the plurals of nouns is not as peculiar to the *Bushmen* language as I thought when writing my essay on that language; for I now see that it is also met with in several *North American* languages spoken to the west of the *Rocky Mountains*. (H. Hale, "United States Exploring Expedition", pp. 534, 537, 545, and 566.)

case, we must reckon the Australian among those languages which had originally a sex-denoting character,—although they need not on this account belong to our own great sex-denoting family. In fact, one of the *East Australian* languages (that of *Lake Macquarie*, described by Threlkeld) still clearly possesses sex-denoting pronouns. The forms of these pronouns are, indeed, not such as to bear any resemblance to the signs of gender in our sex-denoting family of languages; but it must be borne in mind that e. g., in English, *he, him, she, her*; in German, *er, ihm, sie, ihr*; and in Danish, *han* (he), and *hun* (she), do not bear the slightest trace of the original sex-denoting signs of gender. In fact, when once the sex-denoting character has been impressed upon a language, the distinction of sex may, with the disappearance of the old signs of gender, become attached to such particles as had originally no connection with the distinctions of gender. Similarly, a negative character has, in many languages, become attached to elements of speech which etymologically have a decidedly reverse meaning. Thus e. g., the German indefinite pronoun *uh*, “any”, forms, with the original negative particle *ni*, the negative indefinite pronoun *ni-uh*, “not any”. The latter combining with the numeral *ein*, loses its first syllable, and becomes in modern high German *kein*,—so that the *k* now appears to imply negative force, although it is etymologically identical with the *h* of *uh*, which possesses no meaning of this kind.

20. The shape of the pronouns distinctive of sex is due to similar processes, in the course of which the original signs of gender have been replaced by other particles which have, etymologically speaking, no connection with the distinction of gender. The difference between the apparent sex-denoting pronouns of the *Australian* as well as *Dravidian* languages, and the original signs of gender in the great *Sex-denoting family*, is, therefore, no absolute bar to the possibility that they may all have derived their sex-denoting division of nouns from the same source.

21. In this respect, it is to be remarked that the *Dravidian* languages show many other points of resemblance to the *Sex-denoting family*, and particularly to the *Aryan* or *Indo-European* branch. The latter may, indeed, be partly explained by the very probable supposition that the formation of the *Indo-European* languages took place under the influence of neighbouring *Turanian* languages,* just as in the formation of the *Semitic* languages,

* I do not wish to be understood as in any way upholding the theory of the Asiatic home of the Aryan mother-language. I believe, on the contrary, that Dr. Latham's common sense has rightly protested against the probability of a doctrine which derives a family of languages from a part of the world in which only two closely allied branches of it (the *Indian* and *Iranian*) are met with, whilst those branches which have deviated from the original stock in far older times, *Teutonic, Slavonic, Celtic, Italic, and Greek*,

the influence of the *African Prefix-pronominal* languages appears to be discernible. Yet some primary points of resemblance remain which do not easily allow of such a solution. We do not reckon among them the use of suffixes and post-positions; as we find many instances of inversion by which languages have adopted prepositions and prefixes,* where suffixes and post-positions were originally employed. So that the use of either post-positions and suffixes, or prepositions and prefixes, cannot in itself be recognised as a necessary sign of common descent. It is true that, as yet, no language has been historically proved to have exchanged the original prefixes and prepositions, for suffixes and post-positions; but I can see no clear reason why such might not have been the case, and I am inclined to believe that some approach to this inversion has been made in languages of the (African) *Gor* family. On this account, it is quite possible that a language, in which now only post-positions and suffixes occur, may be more nearly related to one in which prefixes and prepositions are found, than to another which agrees far better with it as regards the present position of the grammatical elements.

22. Something more is, therefore, needed, than a general similarity in the arrangement of the grammatical structure, in order to establish any near relationship between languages. A thorough knowledge of, at least, one of the *Australian* languages will be requisite to enable one to see clearly to what family these forms of speech truly belong. But all that I have been enabled to give to this subject are mere fleeting glances; and all that I, therefore, can adduce, are a few observations on points which have struck me as curious.

Thus it appears remarkable to me that in some *Australian* languages the names used for distinguishing either the position of *females* in the family or their caste, end in *-atha*, *-ata*, or *-ato*. In the *KAMILAROI* language, spoken near Sydney, the natives are divided into four castes, viz., *ippai* (masc.), and *ippāthā* (fem.); *murri* or *baia* (masc.), and *mātha* (fem.); *kubbi* (masc.), and *kāpōta* (fem.); *kumbo* (masc.), and *bātha* (fem.). (W. Ridley's paper on the *Kamilaroi* Language in "Transactions of the Philological Society, 1855", p. 83. *Vide* also Norris's edition of Prichard, pp. 490-492).

Further to the west, the *TEREBOO* tribes at the *Condamine*

are without a single original representative in Asia. I should not, perhaps, have been so bold in this instance, in withstanding a deep-set superstition, had I not found that I was supported in my opinions by so excellent a Sanscrit scholar as Professor Benfey.

* The modern European languages do not stand alone in this respect. Both the *Coptic* and the *Khasi* have converted the former construction of the sex denoting languages (with suffixes and post-positions) into one with prefixes and prepositions.

river ("Sir G. Grey's Libr., vol. ii, part 1, Australia," p. 29, vii, B. p.) distinguish two castes, viz., *Cobbi* (masc.), and *Cobbitha* (fem.); *Hippi* (masc.), and *Hippitha* (fem). These are evidently identical with two of the Kamilaroi castes.

Among the *South Australian* tribes from the neighbourhood of ADELAIDE, the children in each family are distinguished by the following names :

MALE.		FEMALE.
First child.....	<i>Kertameru</i> (<i>Kartammeru</i>).	<i>Kertanya</i> (<i>Kartanya</i>).
Second child.....	<i>Warritya</i> .	<i>Warriarto</i> .
Third child	<i>Kudnatya</i> .	<i>Kudnarto</i> (<i>Kudnato</i>).
Fourth child.....	<i>Monaitya</i> (<i>Munaitya</i>).	<i>Monarto</i> (<i>Munato</i>).
Fifth child.....	<i>Milaitya</i> (<i>Midlaitya</i>).	<i>Milarto</i> (<i>Midlato</i>).
Sixth child	<i>Marrutya</i> .	<i>Marruarto</i> (<i>Marruato</i>).
Seventh child ...	<i>Wongutya</i> .	<i>Wonguarto</i> .
Eighth child.....	<i>Ngarlaitya</i> .	<i>Ngarlarto</i> .

(Mr. Moorhouse's Report, etc., in Manuscript No. 3 of Sir. G. Grey's Library.—Vol. ii, part 1, Australia, vii, p. 66).

In the PARNKALLA dialect, these names have the following forms :

MALE.		FEMALE.
First child.....	<i>Piri</i> .	<i>Kartanye</i> .
Second child.....	<i>Wari</i> .	<i>Wayuru</i> (<i>Waruyu</i>).
Third child	<i>Kunni</i> .	<i>Kunta</i> .
Fourth child.....	<i>Munni</i> .	<i>Munnaka</i> .
Fifth child.....	<i>Marri</i> .	<i>Marrukko</i> .
Sixth child	<i>Yarri</i> .	<i>Yarranta</i> .
Seventh child ...	<i>Milli</i> .	<i>Mellakka</i> .
Eighth child.....	<i>Wangguyu</i> .	<i>Wanngurtu</i> .
Ninth child	<i>Ngallai</i> .	<i>Ngallka</i> .

PERSON BEREFT OF HIS
ELDER BROTHER.

Warnpuyu.

WOMAN BEREFT OF HER
ELDER BROTHER.

Warnpurtu.

The *k* of *-ka* and *-ko* in the above-terminations is evidently derived from an original *t*, a letter which is frequently commuted in this manner in the Parnkalla dialect.

24. The termination of so many AUSTRALIAN female names in *-atha*, *-ata*, or *-ato*, reminds us forcibly of the endings of feminine nouns in languages of the SEX-DENOTING family, i.e., *-at*, *obj. -ata*, in Semitic dialects, and also in Indo-European languages, *-t* in the same, and in Egyptian, Coptic, Berberic, Hausa, etc. (*Vide* "De Nominum Generibus Linguarum Africae, Australis, Copticae, Semiticarum, aliarumque Sexualium").

25. That we have not yet discovered any certain traces of the original termination of masculine nouns, is not to be wondered at; for this ending has very generally disappeared in the sex-denoting languages;—a circumstance which appears to be mainly

due to the softer and less tenacious nature of the labial consonant of this termination.*

26. Not too much stress is to be laid upon these points of resemblance, which may be accidental; for these AUSTRALIAN feminine endings may be merely abbreviations of a noun indicating "woman". Yet they deserve to be noticed; particularly in connection with the DRĀVIDIAN termination of feminine nouns, *-atti* or *-tti* in Tamil, † *-iti* or *-ti* in Canarese, and *-adi* or *-di* in Telugu. It is true that Caldwell (pp. 180 and 181), from whom I quote, considers these as neuter terminations applied to the distinction of the feminine gender. But this explanation appears to me by no means probable; on the contrary, it is far more natural and in keeping with the general modes of change in the classification of nouns, that when the old form of the suffix and pronoun of the feminine singular had become homophonous with that of the neuter gender, both genders were combined into one. This appears also to be the case in the Telugu pronoun *adi* (or *idi*), which means "she" as well as "it" (Caldwell, pp. 173 and 174, 182 and 334).

27. But now, let us suppose that these comparisons of AUSTRALIAN and DRĀVIDIAN features of language, with those of the SEX-DENOTING family, hold good. It may yet be objected that languages of the *Turanian* class might still be nearly related to the *sex-denoting* family, without this necessarily involving, as a consequence, that these Turanian languages had ever possessed the distinguishing peculiarity of a division of the nouns into genders, as still found in the sex-denoting languages. But such a supposition would only be admissible in case it were proved that the distribution of nouns into classes or genders in the sex-denoting languages was due to a comparatively recent acquisition. This feature of the structure, however, instead of being newly gained by the sex-denoting languages, is with them only the residuum of a much fuller organisation, which contained a far greater number of different genders, based upon the different derivative particles of the nouns and the pronouns derived from them. Consequently, if these Turanian languages have *not* descended from a structural condition similar to this, they cannot be, in any way, nearly allied to the sex-denoting languages; but would have to be considered as even more distant from them than

* The termination *-tya* of names of male children among the ADELAIDE tribes is possibly to be considered as derived from an original *-ba*, or *-pa* (masc. sing. obj. of the Hottentot language), by palatalisation of the labial sound. In a similar way, the Semitic language has converted the prefix-pronoun *w* of the masculine into *y*.

† *Vellāl-atti*, "a woman of the cultivator caste"; *vellāl-an*, "a man of the same caste"; *oru-tti*, "one woman, una"; *oru-(v) an*, "one man, unus"; *vannā-tti*, "a washerwoman"; *vannā-n*, "a washerman"; etc.

are the Kafir and other prefix-pronominal languages; since the structure of the latter is really founded on the same basis as that of the suffix-pronominal languages.

28. If, on the contrary, these TURANIAN languages have merely lost the most striking features of the PRONOMINAL languages, and are to be included in the class of SUFFIX-PRONOMINAL languages,—then, that member of the latter class which has best preserved its primitive organisation, becomes of the greatest importance for the comparative study and analysis of the structure of any of these Turanian, as well as of the sex-denoting languages. This consideration, of course, greatly increases the value of whatever we may be still able to preserve of the most primitive among the sex-denoting languages, *viz.*, that of the HOTTENTOT tribes, who are now so rapidly vanishing from the face of the earth.

29. It must, however, be remembered that a language, which has retained some very original structural features, is by no means necessarily to be regarded as if in every way exhibiting the original state from which the structure of all the kindred languages is to be derived. No language is entirely stationary; but while some pass rapidly through a great variety of stages, in which their form may be almost entirely changed, others advance but very little from their primitive condition. Yet the latter may, in their slower progress, have obliterated some traits which the former may have faithfully retained in all the phases through which they passed. There are some points in which even modern English is more original than the most ancient Sanscrit. In a similar manner the AUSTRALIAN languages may, through the process of accelerated decomposition, have lost the ancient and original division of the nouns into genders, and yet they may be found in other respects to be more conservative than even the most primitive SEX-DENOTING language, and may thus throw light upon many features which have already been obscured in the HOTTENTOT dialects.

30. For the same reason, the OTYIHERERÓ and other languages of the west coast of South Africa, which are, in general, far less primitive than the KAFIR and ZULU dialects, have retained the ancient number of sixteen different classes of the nouns, while three of these classes have disappeared in the latter dialects. And the POLYNESIAN and PAPUAN languages, which have almost entirely lost this division of the nouns into classes, are yet, in some other respects, evidently much more primitive than any African member of the Prefix-pronominal class of languages. *E.g.* the distinction of exclusive forms of the plural and dual of the first person, is restricted to the Oceanic members of this class of languages.

31. I have here taken for granted a fact which I consider as sufficiently established, and which I have more fully elucidated in a paper on the PAPUAN and POLYNESIAN languages. I may here merely add that the evidence to show that the *Polynesian* dialects belong to the class of PREFIX-PRONOMINAL languages, and that the *Papuan* tongues form the link connecting them with the SOUTH AFRICAN members of this class, is of a much more direct and conclusive nature than that which is yet found to connect any of the Turanian languages with the Suffix-pronominal class. We may, therefore, well assume it as a fact, that the *tropical regions* of the *Oceanic* world, as well as those of the *African* continent, are mainly occupied by languages of the PREFIX-PRONOMINAL class, whilst the SUFFIX-PRONOMINAL languages are found rather on the outskirts of the tropics, and in the more temperate and cold latitudes. The full Negro blood of Africa and of the Papua Islands is, with very few exceptions, restricted to nations speaking Prefix-pronominal languages. The AUSTRALIAN native is probably mainly a degenerate offspring of the SOUTH INDIAN race, and it is possible that the latter may have a share of Negro blood in their veins, although neither their physiognomy nor their hair shews the least trace of such an origin; whilst the colour of the skin can be but of minor importance in deciding ethnological questions. It is, however, not at all improbable that some portion of the Negro race originally occupied the tropical districts of India, and that, through intermixture with conquering tribes from the north, they exchanged their own Prefix-pronominal dialects for a Suffix-pronominal tongue. The physical appearance of the POLYNESIAN race is perhaps still more perplexing in this respect; but we have here certain proofs of the admixture of a *yellow or light-coloured race* from the north, with the original *Papuan* or *Negrito* blood. The latter seems, in this instance, to have prevailed in retaining its own language, or, at least, the fundamental features of its structure.

32. However this may be, there is no doubt that consanguinity of race and of language do not always coincide. The dialects of the jet black SOUTH INDIANS and AUSTRALIANS seem to be derived from more northern zones, whilst those of the light-coloured *Polynesians* are distinctly of tropical origin, and appear to belong to a class of languages which is generally restricted to nations of true Negro descent. The yellow race from the north, who apparently mingled their blood with that of the original Negrito population, probably fared no worse with regard to their language than did the Norman invaders of England with their own. We know that it was through the influence of the latter that the German dialect spoken by the Anglo-Saxons was re-

moulded, and exchanged its primitive, but clumsy, structure for one poor in grammatical forms, but far more convenient and logical; and the original *Papuan* type of the *Polynesian* language seems also to have been simplified through the influence of the *yellow* race that, in this case, overran original *Negrito* territory. It was, to a great extent, through this process of being cast in a new mould, that the original grammatical gender of the nouns in the English language was converted into a logical one; and, also, that the *Polynesian* languages lost, in their formation, the last traces of that distribution of the nouns into classes which is peculiar to the original type of the PREFIX-PRONOMINAL languages, and which is still clearly visible in *Papuan* languages. That the *Australian* and other *Turanian* languages have lost the grammatical gender of the nouns, is perhaps also due to similar influences, *i.e.*, admixture of foreign blood, or the transfer of the language of a conquering tribe to a subjugated nation.

33. We have here seen that the physical descent of nations is by no means indicative of the family or class to which their form of speech belongs. But their mental characteristics, their religious ideas, and their customs and habits, may generally be supposed to be derived from the same source as their language. It is especially remarkable, in this respect, that the two great classes of PRONOMINAL languages exhibit each a different principle of primitive *Mythology*. On the one hand, the nations whose languages belong to the *Prefix-pronominal* class are principally addicted to *Ancestor Worship*, whilst *Sidereal Worship* is common to those who speak languages of the *Suffix-pronominal* class. The religious ideas of the *Kafirs* in South Africa, the *Temnes* at Sierra Leone, the *Maories*, and other *Polynesian* peoples, are evidently originally the same; whilst the principle of *Sidereal Worship*, common to the most ancient nations of the *sex-denoting* family in Africa, Asia, and Europe, belongs also to the AUSTRALIAN, and, as far as I know, to most of the other *Turanian* nations. It is, indeed, true that the spread of one religious belief over nations of quite different descent in language as well as in blood, is by no means a rare occurrence. But proselytising religions generally possess a more substantial form and dogmatical character than the fairy tales of the worshippers of the *Pleiades* and other *sidereal* objects. The Greeks cannot be said to have been over-zealous in converting foreign nations to their own beautiful mythology; and as to ancestor-worship, its very nature renders it a merely tribal and national religion, one which can only be inherited, and not transplanted.

34. It is here difficult for me to refrain from entering more fully into the details of a subject so pre-eminently interesting, which I have treated more at length in the preface to my treatise.

tise "On the Origin of Language." I may, however, be allowed to express the hope, that the time will soon come when the mythological ideas and traditions of all other branches of human kind will be as faithfully recorded as those of the Maori race have been by the exertions of Sir George Grey. Then shall we be enabled to construct a Comparative Mythology of so high and universal a character as has at present not even been imagined by the most sanguine ideologist.

35. With regard to the Australian aboriginal mythology and religious customs and observances, the library of Sir George Grey already contains several very important documents. It would appear from these as if the religious ideas now entertained by the Australian natives were the remains of a fuller and more consistent system of mythology; and, in general, the present state of their manners, customs, and habits, seems to favour the idea that they have fallen from a higher stage of civilisation. The artificial nature of their weapons, their knowledge of the art of spinning, the peculiar system of castes existing among them, and many other circumstances besides, tend to confirm this view. It is, doubtless, not too much to say, that their having been spread in small numbers over a vast continent, produced almost necessarily with them (as it has done with many European settlers in new countries) the loss of many of those acquirements of civilisation which they had originally possessed.

DISCUSSION.

Dr. CHARNOCK, after stating that the Drávidian languages were named from *Drávida*, a term used in Sanskrit writings for the southern parts of the Indian peninsula, and that the principal of these (of which there are nine) are the Tamil, Telugu, Kárnáta and Malayálam, defined the area in which they are spoken. Dr. Bleek thought there was an affinity between the Australian and Drávid languages, because both were sex-denoting, but he (Dr. Charnock) doubted if this amounted to much, when the large number of this class of languages was taken into account. Dr. Bleek suggested a resemblance between the Australian and Drávid pronoun of the first person A., *aga*, D., *nán*; but it would have been nearer had the latter been written with *ng* instead of *n*; and it appeared from the paper itself that the Australian pronoun was nearer the Tibetan and Chinese. It must, however, be noted that the Chinese word was properly *wo* or *go*, although in the manuscript dictionary it was found written *ngo*. But in six of the languages of southern and western Australia (to which part of the continent the paper referred) and also in the Cornu language a different pronoun was used. Dr. Bleek suggested an affinity between the Australian feminine terminations in *atha*, *ata*, *ato*, and the Drávid feminine terminations, viz., in Tamil, *alte*, *tti*, *iti*, *ti*, *adi*, *di*; and this might seem to be corroborated by certain feminine vocables in Sanskrit, and the Tatar and Finnic-

Tatar languages; but, as Mr. Caldwell had shown, the proper feminine singular in Tamil is *al* (Karnāta, *alu*); and the terminations *atti*, etc., are derived from a Telugu neuter. The author of the paper might have shown an affinity between Australian and Dravid in the absence of the sibilant, and the presence of the nasal *ng*. On the other hand there was a paucity of elemental sounds in the Australian, the principal being the dental and the nasal, whereas the Dravid had also the aspirate, guttural, cerebral, labial, and palatal. With regard to the Australian languages themselves (they were languages, not dialects) there was some resemblance between the words of the languages of the north, those of the south, those of New South Wales, and those of the west, and to some extent between those of the south and of the west. There was considerable affinity, vocabulary and otherwise, between the Kamilaroi and the Wiraturei, the former being spoken about Hunter's River and Lake Macquarie, the latter at Wellington Valley, which were about two hundred miles apart. With these exceptions, there was perhaps no country in which the languages had so little in common as those of Australia. It had been said that there were two races in Australia—the Papuan and Malay. As far as languages went, after an examination of about twenty of these, he (Dr. Charnock) had only found two Papuan words; but he had not been able to trace any to the Malay.

Mr. W. C. DENDY remarked that the papers which had been read that evening were replete with statistical and philological information; yet it was to be regretted that the comparative philology of Oceania absorbed so much of the time. No doubt there was much similarity in the languages of the Pacific, but regarding monosyllabic and disyllabic dialects different and even remote tribes might constantly adopt the same syllables and names, without any concert or even knowledge of each other. So the ethnic conclusions on philology would often be very vague. The latter pages, however, of Mr. Wake's paper afforded some important subjects for debate. What were the aborigines of Australia, the present natives? If we are to believe that Australia was the cradle of our race, why do the Maoris, etc., after so many centuries, display so rude and barbarous a nature? They were, whether primitive man or not, the real savages of the earth, and probably, like the negroid, would ever remain so. The uncivilised type of the Creation, they would never attain the exaltation of the Archencephalic or Caucasian family to the standard of high intellect. He thought that the term savage should be restricted to those beings of a low organisation, who could make no progress in civilisation, but remained in their primal state of barbarism. It was a great ethnic error to stigmatise such a being as Caractacus with such an epithet, even though he were a wild uncouth Briton in his rudest state, for he was naturally endowed with all the elements of intellect, sooner or later to be developed. The speaker regretted that a flood of simple speculative philology should have so completely interfered with the full discussion of Mr. Wake's interesting paper.

Dr. R. KING referred to the use of the throwing-stick among the Esquimaux, and to the existence of polyandry among these people.

Colonel LANE FOX remarked that an instrument resembling the Australian boomerang was used by certain hill-tribes in India, and that a similar weapon was also used by the ancient Egyptians, as figured upon some of their monuments. He considered that this fact lent support to Professor Huxley's views on the relation between the Australians, Dravidians, and ancient Egyptians, as deduced from a study of their physical characteristics. The speaker also pointed out some analogy between the shields used by these peoples.

The PRESIDENT observed that the throwing-stick was certainly not peculiar to the Australians. He believed that the so-called Indian boomerang was thrown *directly* at the object, and consequently its principle was different from that of the true Australian boomerang. The system of lending wives was common among many of the lower races, and by no means restricted to the Australians. He doubted whether there was any evidence of polyandry in Australia.

Mr. WAKE, in reply, said that no doubt the throw-stick or *wommera* was as Dr. King said, used by the Esquimaux, and was known in principle to the ancient Romans. As to the boomerang, Colonel Fox pointed out that the ancient Egyptians had, as the Kolis of Southern India still have, an instrument resembling it in form. This is true, but the peculiar action of the boomerang, as described by the President, was special to itself. The possession by these peoples of the same instrument was, moreover, no real evidence of affinity, as it might have been accidentally improved in the same direction, by each of them independently, from a much simpler form, which, like the Australian *dowak* or *dwirri* (the Kafir *kerrie*), might also have been used for throwing at game. As to the moral condition of the Australians, of course the custom of wife-lending alone was no proof of especial moral degradation, but it must be taken as part of the general evidence. Although recognised polyandry did not exist among them, yet wife-lending and the system of allowing young wives to have lovers is practical polyandry. There is literally no evidence that the Australian aborigines have fallen from a higher state of civilisation. Probably they possess an Asiatic element, but, when introduced, this was doubtless as barbarous as that with which it became blended. Mr. Dendy's opinion that, as they are unimprovable, they could not be the primitive race of man is untenable. If man originated in Australia, he would ultimately spread into countries where the conditions were better fitted for progress, and where improved races would be formed from which the present ones were more immediately descended.

ANTHROPOLOGICAL MISCELLANEA.

NOTICE OF SOME RECENT ANATOMICAL WRITINGS BEARING UPON ANTHROPOLOGY, BY PROF. LUIGI CALORI, OF BOLOGNA.*

In the sixth volume of the *Anthropological Review* (No. 22, p. 279), some account was given of a memoir of Professor Calori upon "The Brain of a Negro of Guinea," which he had read before the Academy of Sciences of the Institute of Bologna. It was hinted in that article that Dr. Calori's study of the Negro brain was far more elaborate, accurate, and complete than any which had preceded it, and that it was deserving of high commendation. This eminent anatomist has not been unmindful of the anthropological bearings of his noble science, since the issue of the essay upon the brain of the Ethiopian. On the contrary, he has sedulously pursued his inquiries in different select directions. We now purpose to give a brief sketch of these.

I. The first of his memoirs, to which we wish to recal the attention of anthropologists, was a note upon the supernumerary sutures in the human skull, and those especially of the *ossa parietalia*.† This explanatory memoir took its rise from a preceding note of Dr. Eudes-Deslongchamps, secretary of the Linnæan Society of Normandy. Dr. Eudes-Deslongchamps had received a series of skulls of New Caledonians, from M. Déplanche, a naval surgeon, among which are crania of those who were killed in a massacre in New Caledonia, which took place in February, 1857, at the house of M. Bérard, a naval administrative officer, who also fell. The natives met their deaths on that occasion by blows upon the head inflicted by iron hatchets derived from Europe. A calvarium among these New Caledonian skulls presents the remarkable anomaly of having a suture running almost horizontally through the whole extent of the left parietal bone, from the coronal to the lambdoidal suture, and dividing it into two nearly equal halves. This anomalous calvarium of a man of eighteen or twenty years of age is described, and also figured in two aspects in the Bulletin of the Linnæan Society of Normandy,‡ vol. x. In this note M. Eudes-Deslongchamps says, that he does not know "any example of a suture placed in the midst of the parietal, extending from that which unites this bone to the frontal to that with which it meets the occipital, or the lambdoidal suture, passing

* Read before the Anthropological Institute, April 3rd, 1871.

† "Intorno alle Suture Soprannumerarie del Cranio Humano e su quelle specialmente delle Ossa Parietali." Bologna, 1867. 1 Tavola. 4to.

‡ "Note sur une Suture insolite, partageant en deux moitiés à peu près égales le parietal gauche d'une tête humaine." Par M. Eudes-Deslongchamps. Caen, 1866.

over the parietal boss itself." Dr. Eudes-Deslongchamps is inclined to regard this unusual suture of the left parietal in the light of an instance of the occurrence of a Wormian bone, and thinks it probable that the skulls of New Caledonians are particularly subject to the development of Wormians.

In reply to the opinion of M. Eudes-Deslongchamps, and to illustrate the subject of supernumerary sutures of the cranium, the learned anatomist of Bologna points out that such an unusual suture in this bone has been described by different anatomists, of whom he names Portal, J. F. Meckel, and E. E. Weber. These are writers of the present century or the latter end of the last, but Dr. Calori further shows that the older anatomists were fully aware of the occasional occurrence of such a suture, as it is mentioned by Tarin and Van Doeveren, and it has been known to anatomists more than a century, and described or figured by Sue, Aurivilliers, Voigtel, Meckel, and Soemmerring. After thus correcting the notion of M. Eudes-Deslongchamps, Professor Calori proceeds to describe, at some length and with care, the small prognathous skull of an Italian woman of thirty-seven years of age, which came into his hands in 1845. Suffice it to say that this cranium presents an anomalous suture running through each of the parietals lengthwise. This supernumerary suture is not symmetrical on the two sides, but begins at a much higher point in the coronal suture, and terminates at a much lower point in the lambdoidal suture on the right side than on the left; still, in both parietals it passes across the bone from its anterior frontal edge to its posterior or occipital edge. This remarkable skull, presenting such a singular example of supernumerary sutures, is delineated in Dr. Calori's memoir in four aspects, presenting a view of each side, and of its vertex, and a posterior view. The correction of this error of Dr. Eudes-Deslongchamps is performed in a graceful manner.

II. The next memoir of Dr. Luigi Calori to which we may direct attention, is a Letter addressed to Professor Giustiniano Nicolucci, "On Posterior Occipital and Interparietal Wormian Bones in European Skulls and those of the lateral Fontanelles in the Skull of a Negro."* This essay took its rise from a photograph of a Greek skull from Zante, which was sent to the author by Dr. Nicolucci, and which presented a most remarkable Wormian in the lambdoid angle. Dr. Nicolucci had invited the opinion of Calori upon this unusual bone. This bone, he says, is commonly known under the denomination of *os triquetrum*, the three cornered or triangular Wormian of the posterior fontanelle, and has also been called *os epactale*. Riolan and Olaus Wormius, from whom the small ossicles of the sutures are wrongfully named, attributed their discovery to G. Guinterus. But the "*ossiculum verticis triangulare*" of Guinterus is not the occipital Wormian. It is one situated in the anterior fontanelle where the

* "De' Wormiani occipitali ed interparietali posteriori dei cranii nostrali e di quelli delle fontanelle laterali ne' cranii di Negro." Lettera responsiva del Prof. Luigi Calori al celebre craniologo Prof. Giustiniano Nicolucci. 1868. 4to.

sutures meet, that is, where the sagittal joins the coronal suture, and was denominated *os anti-epilepticum*, which, if confidence is to be placed in Paracelsus, is a "divinum remedium" against epilepsy, that is, when administered as a medicine.* This presumed specific for the Falling Sickness should be of the size of a kreutzer, a German coin, but is figured of a triangular form. Professor Calori mentions many anatomists who have treated of epactal bones, and speaks of Fischer, whose work published at Moscow, in 1811, has the title "*De osse epactali seu Goethiano*," from the poet Goethe having written letters to Loder and Soemmerring upon these bones.†

Dr. Calori next proceeds to describe the posterior Wormians observed in the crania in the Anatomical Museum at Bologna. These he has arranged under two heads: 1. *Occipital Wormians*, or those developed at the expense of the lambdoidal portion of the occipital; and, 2. *Wormian*, or *interparietal bones*, or those formed of a portion of the parietals, or in chief part of these bones and in a minor degree of the occipital (occipito-parietal). Of many of the skulls described the author gives some measurements, and in a lithographic plate posterior views of fifteen of these crania at a fourth of the superficial size, indicating the great variety of Wormians they present. He also points out those Wormians which resemble normal bones in the skulls of lower animals.‡

These described crania, singular for their Wormians, are generally large and capacious, and such, he adds, appears to be the case with the Greek skull from Zante. They are notable for a certain posterior broadness, and are chiefly brachycephalic.

Calori closes his memoir by the description of the skull of a handsome Negro, who was in the military band of the Austrian President of Bologna. This skull, of which a lithograph in profile of the natural size is added, has no occipital or interparietal Wormians, much less any in the anterior fontanelle, but it is distinguished by Wormians in the anterior lateral fontanelle, or between the great wing of the sphenoid, the anterior inferior angle of the parietal and the frontal, and also in the posterior lateral fontanelle, or between the posterior inferior angle of the parietal and the mastoid portion of the temporal. These anomalous ossicles are small, and do not correspond on the two sides. They are, however, considered sufficient to show that the Negro skull is usually distinguished by an absence of Wormians.

* This *os anti-epilepticum*, or Wormian ossicle, at the point of the approach of the sagittal suture to the frontal bone, is not often met with. If epilepsy were only curable by taking portions of this bone, it may be safely said that an exceedingly small number of cures could by any possibility be effected. It occurs in the skull of a Kanaka, No. 435, "*Thesaurus Craniorum*", p. 331.

† Professor Calori passes over the memoir of Dr. Jacquart, "*De la valeur de l'os épactale comme caractère de race en anthropologie*," 1865.

‡ None of the skulls enumerated by Professor Calori are equal to some of those recorded, in which Wormians have had such an extraordinary prevalence. Professor E. J. Bonsdorff, of Helsingfors, describes and figures a human cranium, in which the left parietal was made up of sixteen, and the right parietal of eight Wormians. "*Beskrifning af ett missbildadt cranium hos en Man*." "*Acta Societ. Sci. Fennicæ*", tom. ii, p. 1283. 4to. 1847.

As already remarked, the crania with Wormians are chiefly brachycephalic. Hence, Dr. Calori inquires, whether there is a greater disposition in brachycephalic skulls for the formation of these bones. But the most brachycephalic of his Italian skulls, having a cephalic index which varies from 90 to 91, belonging to individuals of 30 to 40 years of age, have all their normal sutures open and manifest. Such a high degree of brachycephalism has something embryonal about it, and Professor Calori is disposed to distinguish it by the epithet *brachycephalia embryonale*. The brachycephalic crania of other nations have no Wormians in the usual positions, as far as the author is able to observe, but he possesses only three of these, a Slavic and a Swiss skull, and a third of a soldier named Zinganu. These are all synostotic crania, and are insufficient to support any theory.

The genesis of occipital and interparietal Wormians, as well as that of others, is easily to be understood. Being in broad crania that they present themselves, and in conjunction with this, in crania having a corresponding breadth of the membranous spaces of the sagittal suture and the posterior fontanelle, we have here the conditions most favourable for the production of these Wormians. In the lambdoidal region of the occipital there are two other causes which favour their formation. One rests upon the primitive mode of its composition. According to Kerckring, it is at first formed of at least four osseous germs; as was well known to J. F. Meckel, even by eight. As the extension of the ossification in any of these germs proceeds more slowly than in the others, for reasons not always imaginable, there will be a distinct supernumerary ossicle, an occipital Wormian. The other cause is the pushing backwards of the posterior lobes of the brain by their development and increase, thus removing the upper portion of that region of the occiput away from the parietals, and rendering it much more prominent, and, in truth, in the crania which present unusual occipital Wormians the occiput is found to project considerably in correspondence with these lobes.

Professor Calori concludes with a question: Does the presence of the Wormians described indicate a perfection, a superiority in the skull which presents them, or in the human cranium, or the contrary? Some might be inclined to believe it to be an index of superiority, especially as it is most frequently met with in broad and large crania. Notwithstanding, when it is recollected that occipital and interparietal Wormians, and in some cases those of the anterior fontanelle also, occur in brute animals, the first frequently, this might contradict the supposed indication of perfection, the supposed superiority, and point to a less perfection, an inferiority, or, as it is said, an animal tendency.

III. It was the received opinion that there are two cranial types in Italy, the brachycephalic and the dolichocephalic, the latter being proper to Italians of the present day, save in Liguria and Piedmont, where the brachycephalic type prevails. This was the doctrine indicated by Dr. G. Nicolucci in his important memoir of 1864, on "The

Ligurian race in Italy in Ancient and Modern Times."* He maintained that the ancient Ligurians and their descendants in the north of Italy are distinguished from the rest of the Italians by their marked brachycephaly. Professor Calori being led to reflect upon this point, soon afterwards perceived first of all that the people of Bologna, not in agreement with this opinion, presented more brachycephalism than dolichocephalism. He did not, however, at once establish this position sufficiently by the measurement of an adequate number of heads. In his next memoir, that "On the Brachycephalic Type of the Italians of the present day,"† he gives the results of a further and fuller investigation of the subject.

It should be remarked in this place that the opinion prevailed among those who were most conversant with the matter, that the primitive inhabitants of Europe were brachycephalous, but that at a vastly remote period of time a dolichocephalous race from Asia invaded the continent, and finally established themselves upon European soil. These long-headed invaders,—the so-called Aryans,—came amongst the allophylian races of Europe as superiors. Into some regions, as Liguria, they scarcely penetrated. In others, they subdued the aborigines, destroyed many, reduced them to servitude, and, to some extent, eventually mingled with them, so as to introduce some degree of dolichocephalism into the population. So that if this hypothesis were correct, the degree of brachycephalism would be commensurate with the purity of aboriginal blood, and the mixture of dolichocephalism, the indication of the extent to which the higher Aryan race had replaced the earlier allophylians.

The speedily-obtained result of Professor Calori's observations was that brachycephalism is very prevalent among the Bolognese population. The author has tabulated his measurements of Bolognese skulls. In Table I he gives the measurements of 100 heads of adult Bolognese men. The examination of this table shows that 76 of these are brachycephalic, or have a cephalic index of 80 or more; 19 are orthocephalic, or have an index from 74 to 80; and only 5 dolichocephalic, with an index less than 74. Table II likewise gives the measurements of 100 skulls of adult Bolognese, one half of men, the other half of women. The results of this table are not less remarkable: 79 are brachycephali, 16 orthocephali, and but 5 dolichocephali. The next, Table III, is much larger, and embraces the dimensions of 853 heads of the population of Emilia, a division of Italy, which includes the former Legations of Ferrara, Ravenna, and Forlì, as well as the former Dukedoms of Modena and Parma: this is the chief part of northern Italy. Of these 853 heads, 733 are brachycephalous, 111 orthocephalous, and only 9 dolichocephalous. Table IV gives the measurements of 254 heads of people of the late Lombardo-Venetian kingdom, and of the Italian Tyrol. These again present

* "La Stirpe Ligure in Italia ne' tempi antichi e ne' moderni", per Giustino Nicolucci. 1864. 4to. 7 Tables.

† "Del Tipo Brachicefalo negli Italiani odierni", memoria del Prof. Cav. Luigi Calori. 1868. 4to.

similar results, for 230 are brachycephalic, 23 orthocephalic, and but one truly dolichocephalic. In this case, and it is pretty much the same in the preceding tables, there are 10 brachycephali to one dolichocephalous person. In a population of this kind Professor Welcker's division of orthocephali seems to be superfluous. The older and simpler division into two classes, brachycephali, where the index is 80 or more, and dolichocephali, where the index is less than 80, appears best.

Before we proceed to the next Tables of more southern districts of Italy, in which the proportion of brachycephalism decreases, let us pause. The Tables already given prove that brachycephaly prevails in an extraordinary degree in northern Italy over a greater extent of country than the ancient Liguria and Piedmont, which Nicolucci claimed for it. In the arrangement of nations by Retzius, according to the form of the head, he included the Italians among his brachycephali, and the old Romans and their descendants among his dolichocephali.* Dr. Weisbach, in his accurate work upon the skull-forms of the Austrian peoples, pointed out that the majority of the Italian skulls in his collection, from the population of the then Austrian divisions of Italy, were brachycephalic; the proportion was 17 to 10.† The investigations of Professor Calori show in northern Italy a much higher proportion of brachycephali. A few years ago a discussion, instigated by the late Mr. Crawford, took place at the Society of Antiquaries about the value of skull-forms, when Professor Huxley pointed out the great extension of definite forms, dolichocephalic and brachycephalic, in certain wide spread races. He said, "in the south of Germany, and thence eastward to Central Asia, including the whole Central Asian area, we shall find, as a general rule, a broad type of skull predominating."‡ Had Professor Huxley been aware of the fact, he might have pointed with even more precision to Northern Italy for such a characteristic. Whatever may be the meaning of it, Professor Calori has proved the very great prevalence of brachycephaly in northern Italy.

The next of Professor Calori's Tables (v) refers to the population of a country a little further south—Tuscany—in which dolichocephaly increases.

In 213 heads 34 are brachycephalous, 59 orthocephalous, and 20 dolichocephalous, or, using the earlier division, 134 brachycephalous and 79 dolichocephalous. This still shows a large predominance of broad heads. In Table vi the measurements are taken from the heads of 377 inhabitants of the more eastern part of Italy, extending to the Adriatic. Among these 265 are brachycephalic, 105 orthocephalic, and but 7 true dolichocephali. If the two latter are put together, there will still be more than double the number of brachycephali.

* "Ethnologische Schriften." P. 164.

† "Beiträge zur Kenntniss der Schädelformen österreichischen Völker." P. 76.

‡ "Proceedings of the Society of Antiquaries", vol. iii, p. 284. 2nd series.

Table VII embraces the population of the actual (now, happily, late) Pontifical State. It includes the heads of 200 persons. Of these 52 are brachycephalic, 100 orthocephalic, and 48 dolichocephalic. In other terms, there are three dolichocephali to one brachycephalus—a very different proportion from any that we have hitherto met with among the people of Italy. Table VIII refers to the population of the ex-kingdom of Naples. Of the 363 people in this Table, 131 are brachycephalic, 169 orthocephalic, and 63 dolichocephalic, *i.e.*, nearly twice as many with long heads as with broad ones. The last Table presents a still more striking tendency in the same direction, although it embraces but a few persons measured. They are inhabitants of the Island of Sardinia, and are 32 in number. Of these only 2 are brachycephalous, 14 orthocephalous, and 16 dolichocephalous.

These numerous valuable Tables show that Dr. Nicolucci was not quite correct in restraining brachycephalism to the Ligurians and their descendants, nor in regarding the rest of the Italians as dolichocephalous. Still, he evidently had some grounds for his opinion, inasmuch as there is clearly an extreme proportion of short broad heads in Northern Italy, which apparently diminishes as we travel southwards; in Sardinia the dolichocephalic type vastly predominates.

Professor Calori has acted with great judgment in undertaking this laborious measurement of Italian skulls and heads, by which the real value of opinions is tested. What bearing the results will have upon the Aryan hypothesis we cannot tell; whether its upholders will be satisfied with a much smaller admixture of Aryan blood in a large portion of Italy, and a much more extended and prevalent remnant of aboriginal strength. We have no doubt, however, that the supporters of the hypothesis will explain the facts to their own satisfaction.

The number of those measured in the nine Tables of Professor Calori, without reckoning the women, amounts to 2442. Of these, 1665 are brachycephalic and 777 dolichocephalic, diffused unequally in the various regions of Italy. The mean cephalic index in the brachycephali is .84, and that of the dolichocephali, .77.

Professor Calori's conclusions, derived from the investigations of this important memoir, may be briefly stated. The proposition that the Italian type of the present day is dolichocephalic, save in Liguria and Piedmont, where the brachycephalic type predominates, is not valid. It would be more correct to say that in Italy the two types of brachycephali and dolichocephali occur everywhere, but that the first seems to predominate, so that the brachycephali might be admitted to be to the dolichocephali as about 2:1; or, according to the measurements, there are 68 brachycephali in 100 persons.

The two types are not equally distributed in the different provinces or regions of Italy. Sometimes the one prevails in a region, sometimes the other. Thus brachycephalism predominates in the north and in the centre of Italy, but it is exceeded by dolichocephalism in the Roman States, the ex-kingdom of Naples, and in Sardinia.

The brachycephali as well as the dolichocephali are generally or-

thognathous, and also more frequently large than small; the cubic capacity of the crania of the large brachycephali exceeds that of the large dolichocephali.

According to Professor Calori, the bearing which these conclusions must have upon the Aryan hypothesis of the introduction of a long-headed race into Italy at a vastly remote period, and the mode in which this is to be reconciled to the facts observed, cannot be fully elucidated until not only the skulls of these two types and their chief varieties are thoroughly studied, but also and especially their brains, in order to discover whether there are any differences in some group of the cerebral convolutions, in their extension, as well as in the superficies of the various lobes and the internal cerebral mass, not omitting the genuine form of this mass, its weight, and all that relates to an exact appreciation of the organ of the two types.

IV. It is in some measure to the solution of this difficult and complex problem that Professor Calori's latest memoir is devoted. This is entitled "Upon the Brain in the two Italian types Brachycephalic and Dolichocephalic,"* and is issued in a form of unusual magnificence, in large folio, with an atlas of eight lithographic tables.

The work is divided into four parts. Article 1, On the Figure of the Brain in the two above-mentioned types; Article 2, The Cerebral Convolution, their various aspect, their topography, and their variety or anomalies; Article 3, On the Weight of the Brain in the two Italian types, brachycephalic and dolichocephalic; Article 4, On the extension of the Cerebral Superficies in the two Italian types. It also contains many Tables. The second article is the longest, and goes into a thorough examination of the cerebral convolutions and the varieties they present.

Article 1 commences with an historical abstract of the opinions of celebrated Italian anatomists and physiognomists upon the form of the head and brain among Italians, in which it is shown that they received three figures of the brain—the oval, proper to the civil population, the rotund or subrotund, and the elliptical—three figures which are indicated by the authors cited, and which belong to the human race in general.

Here Dr. Calori is led to allude to the opinion, which has been often maintained even by good anatomists, that the head may have certain forms impressed upon it when newly born by the manipulation of midwives. Blumenbach, when describing his round skull of a Turk, quotes Vesalius, who asserts that certain races have the globular form of skull from this cause, as the Genoese, Greeks, and Turks. It appears surprising that any one acquainted with the elastic properties of the head in infants could be led to attribute any deformative influence to transient pressure. In order to give a permanent change of form continuous constriction or pressure is absolutely necessary, and all races who modify the shape of the skull designedly keep the infant in a state of imprisonment and compression for

* "Del Cervello nei due Tipi Brachicefalo e Dolicocefalo Italiani." 1870. Folio. Con un Atlante di otto Tavole litografiche.

months after birth; as a general rule, for the first twelve months. We now know that the fetus in utero has an asymmetrical brain and skull;* and the effects of placing the head in a certain position during repose and sleep are well understood in producing deformation,† still, transient pressure cannot be accredited with any results whatever. Professor Calori is able to quote the assertion of Professor Federico Bozi, his colleague, who lived a long time at Constantinople, following the practice of medicine, attended many accouchements, and treated a large number of children. Professor Bozi says that it was formerly the custom among the Turks to attempt to fashion the shape of the head, but such practice is now abandoned. The midwives would not now be permitted to perform any operation upon the head.

The learned Scaliger, the first of the name, attributed to the Genoese a form of cranium produced by artificial deformation, and that of the most improbable character, by flattening the sides of the head. This deformation received the name of *Thersitic*, from the ugly Thersites, who was at the siege of Troy. Scaliger ascribed this practice to the Saracens, the asserted progenitors of the Genoese, and says that it had been in vogue so long, that the Genoese were then born of the true shape without any artificial interference—a palpable absurdity. Such flattening of the sides of the head, not produced by art, but by nature, Professor Calori says, is very rare in Italy. He has seen but one instance of it, which was in a soldier of the line; he was not a Genoese. The author says he has examined many Genoese, and they were all brachycephalic.

Vesalius, speaking of long crania, or the dolichocephali of Retzius, seems to be inclined to regard them as not natural, but artificial; produced by lying sidewise upon the temples. Still the Sardinians, who are remarkable for their dolichocephalism, certainly do not use any artificial means to produce it. Dolichocephalism is native among the Sardinians, as brachycephalism is in other parts of Italy. And, in fact, there are continually seen born brachycephalic and dolichocephalic children, who grow up and ultimately become adults. The precocious synostosis of the occipito-sphenoidal synchondrosis is not observed to be the occasion of the brachycephaly, or on the contrary. Synostosis, where it occurs, is merely a concomitant. V. Malacarne, an Italian anatomist, who devoted such long and laborious study to the brain, in the enumeration of the figures of the cranium and the brain, names only three, which is in agreement with Professor Calori's observation. These are the round, the oval, or almost oval, and the elliptical. These three cranial or cerebral figures are those most frequently observed in Italy, and are those which the various races of the human species present. A form truly round, conformably with the epithet, is not a common contingency. The author has only once seen an example, and that was in the skull of a lunatic in the Bologna

* "On the Asymmetry of the Body ('Axedeel') of the Human Skeleton." By Dr. A. Stadfeldt. *Förhandlingar vid de Skandinaviska Naturforskarnes Niönde Mötte i Stockholm*. 1863.

† "De Asymmetrie der Javaanische Schedels." Door Prof. H. Halbertsma. VOL. I. I

Museum. As to the elliptical figure of the brain, he says that he has not really met with it, except in the dolichocephalic type; an example of which he has depicted in Table II, fig. 6, in which the brain represented is a perfect ellipsis in its outline.

Professor Calori has given great attention to the difficult matter of depicting the brain with exactness, so as to preserve its true and natural figure. He considers the methods adopted by preceding anatomists, particularly Gratiolet, and points out the imperfections in these methods; and also describes his own experiments in seeking a better process. He then gives an account of the plan he finally fixed upon, which demands a great deal of care and time in the manipulation. He regards the temperate seasons of spring and of autumn as the proper times for the operation, but there are many other requisites to success. The brain must not be soft, and its freshness is essential. He avoids the escape of the humours in decapitation. He then opens the cavity of the skull circularly, raises the calotte and the membranes with celerity, and immediately covers the exposed surface with liquid plaster of Paris. As soon as this is set, he turns the head upside down, raises the base of the skull, divides with a stroke the optic nerves, then the infundibulum, the internal carotid, and the cerebral crura near the tuber annulare. The base of the brain being thus exposed, is speedily deprived of the arachnoid and pia mater, and then covered with liquid plaster; so that the brain is thus enclosed as if it were between the two valves of a bivalve shell. By immersing this form in water for about twenty minutes, it will come off the surface of the brain without sticking, when the organ may be weighed accurately, and immersed in alcohol for preservation, and for comparison with the cast made from the form. The cerebellum is treated in a similar manner; and afterwards an accurate plaster cast is taken of the interior of the skull. The object of these proceedings is to be able to compare and to study one with the other, and to correct and complete any defective portion. When these things are all successfully accomplished, a good artist will be able to produce a faithful image of the brain. For the atlas appended to this memoir, the author has been compelled to repeat the operation described a great number of times.

In this part of his work, Professor Calori gives some account of his Plates. The magnificent Atlas consists of eight large folio Tables, and contains thirty-three figures, all finely lithographed, of the size of nature. The object is to represent Italian brachycephalic and dolichocephalic brains completely. The different views are vertical (*norma verticalis*) and lateral, to which are added in the last Plate four views of the cerebral hemispheres seen from the inside, when the brain is bisected in the median line. The author does not confine himself to one instance of either section of brains, either brachycephalic or dolichocephalic, but gives figures of large brains, middle-sized brains, and small brains, both brachycephalic and dolichocephalic. In this way, for example, there are no less than twelve vertical views of different brains. He remarks that an inspector of his Atlas

will at once see in the first three tables a want of symmetry in the two sides of the brain. This is in agreement with the asymmetry of the two halves of the body, and is entirely in concord with nature. Those who have given figures of the upper surface of the brain have generally represented it symmetrically. It may also be added that he presents figures of the brains of Italians, both of men and women, from different parts of Italy, and he has been careful to have the convolutions depicted with great accuracy. Some of the brains delineated are intended to represent the oval figure of the organ in both brachycephali and dolichocephali; others the rotund form of the brain, and, lastly, others the elliptical shape.

It should be noted as one of the results of Professor Calori's investigation, that the brains of large dolichocephali are not found to be so heavy as those of large brachycephali.

At the conclusion of this Article, Professor Calori refers to a fine and interesting anomaly in the figure of a brain of the dolichocephalic series which has fallen into his hands. It is the brain of a youth of fourteen years of age, is of extraordinary size, and the subject to which it belonged had intellectual and moral gifts above the common. It is a scaphoid brain, and is of great importance, since the principal writers upon scaphocephalism, as Von Baer and Barnard Davis, have confined themselves to skulls, since they had not any brains exhibiting this anomaly within their reach. Antonio, who came to be surnamed "long head", was born in the province of Como upon Lake Maggiore. He was docile, amiable, diligent, and, besides admired for the quickness of his talents, the readiness of his discourse, and such prudence in his answers and opinions as many of the old men of his country did not display. He was an orphan. Neither his parents, his sisters, nor his maternal uncles, who took care of him, exhibited in their heads any similar appearance, so that it could not be regarded as hereditary. He was born so, and grew up so, was slender in bulk rather than otherwise, and not tall of his age. In the spring of 1866 he abandoned his native soil to ramble about with his uncles as a wandering musician. The party arrived at Milan. Here they felt themselves in great difficulties, when Antonio undertook to instruct the others, and played correctly. They left Milan and went to Bologna, where Antonio died in the hospital, in March, 1868. Of this remarkable scaphoid brain Professor Calori gives different figures. Table iii, fig. 12, represents a vertical view of the brain; Table vi, fig. 24, a profile view; Table vii, fig. 26, affords a front view of the brain; fig. 27, a back view; fig. 28 a view of the base; and Table viii, fig. 33, is a section in the median line showing the inner surface of one hemisphere. The author has done well to illustrate this scaphoid brain so fully, as it is of great interest, and the first instance of the representation of such an anomalous organ. It is a brain remarkable for its unusual length, narrowness, and height, and from being produced in the sagittal region into an elevated ridge.

Article 2. "On the Cerebral convolutions, their Different Aspect, their Topography, their Variety, or Anomalies," extends over the

larger portion of this valuable memoir. Its subjects are examined and explained in the same able manner as the rest of the treatise, but, in the absence of the beautiful plates, scarcely admit of any analysis. In the introductory remarks the claims of our English anatomist, Willis, are established for the discovery of the longitudinal, antero-posterior, and transverse directions of these convolutions, generally attributed to Leuret. The author also speaks highly and very justly of the early labours of Rolando, the Italian anatomist, in this department. This article goes on to the description of the convolutions and their varieties at considerable length, and is perhaps one of the most complete treatises upon the subject existing. Although Professor Calori points out in the course of his investigations numerous varieties in the convolutions (he does this in a general way), we do not see that he indicates any of them as belonging particularly to the brachycephalic or to the dolichocephalic brain, which we might have expected that he would have done had he found such peculiarities to exist. As a final conclusion, he says, that the varieties he has met with in the circumvolutions are not so numerous as might have been expected. They are, in truth, much less numerous than varieties in the muscles, vessels, and nerves. This greater uniformity of structure he attributes to the importance of the functions of the convolutions themselves.

Article 3 is "On the Weight of the Brain in the Two Brachycephalic and Dolichocephalic Italian Types." This is a very valuable contribution to the great subject of the weight of the brain, especially as the observations of Professor Calori are the results of actual testing the weights of brains themselves in the balances. By the assistance of his friends in different parts of Italy, he has been enabled to extend his researches to four hundred and twenty-one brains of different individuals, the greater part of men. His first point was to measure the longitudinal and transverse diameters of the skulls when deprived of their soft parts, in order to determine the cephalic indices, which he divided into dolichocephalic when they fell below .80, and brachycephalic when of .80 or upwards. He then opened the cranium, received the brain upon a handkerchief, divested it of its meninges, divided the crura cerebri immediately before the tuber annulare, and weighed the hemispheres by themselves, next the cerebellum, and, lastly, the medulla oblongata with the tuber annulare. In those observations in which he could ascertain the weight of the whole body as well as that of the brain, he availed himself of the opportunity. He found that the weight of the brain in adult men stands to that of the body as 1:46 or 50, and in adult women as 1:44 or 48. The weight of the body in the first was 60,000 to 65,000 grammes, and that of the second 50,000 to 55,000 grammes. This result differs materially from that stated in Cuvier's Lectures on Comparative Anatomy, which is 1:30 or 35. As to any correspondence of stature to weight of brain, he has not been able to determine any. Men of high stature have sometimes had a large brain, and *vice versa*. It was the same in the case of women. Professor Calori gives the important results of

his researches in four tables, all of which refer to the brains of adults. The first contains the weights of the brain in two hundred and one brachycephalic men; the second in a hundred and four dolichocephalic men; the third in seventy-two brachycephalic women; and the fourth in forty-four dolichocephalic women—making four hundred and one instances of brain weights carefully and precisely determined. He arranges his matter in these tables in a very instructive form, giving in separate and successive columns the age of each individual, the longitudinal diameter of the skull, its greatest transverse diameter, the cephalic index, the weight of the cerebral hemispheres, the weight of the cerebellum, the weight of the medulla oblongata with the tuber annulare, and, lastly, the weight of the entire encephalon. The general means deduced from these tables are as follow, in grammes :

IN BRACHYCEPHALIC MEN.			
Hemispheres.	Cerebellum.	Medulla and Tuber.	Encephalon.
1145	134	26	1305, or 46 oz.
IN DOLICHOCEPHALIC MEN.			
1122	134	26	1282, or 45 oz.
IN BRACHYCEPHALIC WOMEN.			
1004	123	23	1150, or 40·5 oz.
IN DOLICHOCEPHALIC WOMEN.			
992	121	23	1136, or 40 oz.

These results exhibit, in a striking manner, the greater weight of the brain in brachycephali, which has been already alluded to, and which may be safely asserted to have been first brought out by Professor Calori. It will be instructive to give the extreme weights of the brains enumerated in these tables. Among the 201 brachycephalic men the lightest brain weighed 1024 grammes (about thirty-six ounces), in a subject who was twenty-two years of age; the heaviest brain weighed 1542 grammes (rather more than fifty-four ounces), in a subject of thirty-three years of age. This is a difference between the two of 518 grammes, a little more than eighteen ounces, or upwards of a third of the weight of the heaviest brain. In the second table of 104 dolichocephalic brains of men the same discrepancy is observed. The lightest is 1088 grammes, a little more than thirty-eight ounces, age thirty-four years; and the heaviest is 1490 grammes, rather more than fifty-two ounces, age sixty-nine years; where the difference of weight between the two is 402 grammes, or above fourteen ounces. In table three, of seventy-two brachycephalic women, the lightest brain is 909 grammes, or thirty-two ounces, in a woman of seventy-seven years of age; the heaviest is 1312 grammes, or a little more than forty-six ounces, in a girl of nineteen, *i.e.*, a difference of 403 grammes, about fourteen ounces. In table four, among thirty dolichocephalic women, the lightest brain is 918 grammes, or more than thirty-two ounces, and the heaviest 1351 grammes, or nearly forty-eight ounces, showing a difference between the two of 433 grammes, or above fifteen ounces. These differences prove a great range of diversity in brain weights among the same people. The weights of Italian brains have been previously determined by Weisbach, Bar-

nard Davis, Nicolucci and Gaddi, and our author shows that there is a general agreement among these observers with the results he has obtained; the discrepancies are easily explained.

The last division of Professor Calori's memoir is Article 4, *On the extension of the Cerebral Superficies in the two Italian Brachycephalic and Dolichocephalic Types*. This subject carries us back to a memoir of Dr. Hermann Wagner, of Gotha, who decided to measure the superficies of the different lobes of the brain by applying gold leaf to the surface.* He adopted this method with the brains of Gauss, Fuchs, a woman aged twenty-nine years, and Krebs, all which brains had been depicted with great care and accuracy by his late excellent father, Professor Rudolph Wagner.† Dr. Calori's method is different from that of Hermann Wagner, and in some respects superior to it. The result he gives in square millimetres in two large tables.

We have already spoken of the grand folio Atlas of lithographic Plates of Brains, which are of great beauty, and bear unmistakable marks of fidelity to nature. It is highly creditable to its zeal in the promotion of science to the learned body which has issued it—the Academy of Sciences of the Institute of Bologna.

It would have been impossible for the late excellent Professor Retzius, who distinguished the different races of men by their dolichocephalic and brachycephalic skulls, to realise the fact of the issue of this splendid and learned work upon the heart of the matter, dolichocephalic and brachycephalic brains. Retzius saw the importance of these cardinal forms, still only in a somewhat crude manner. Calori, whilst showing that neither the one nor the other is exclusively proper to Italians, but that both belong to them in different proportions in different regions of Italy, where no doubt race is diversified, has the rare merit of having followed out the inquiry with great zeal and skill by determining the specific characters of brachycephalic and dolichocephalic Italian brains. No more laborious or substantial contribution to the anatomical division of anthropology has been made for many years, and certainly none more deserving of a welcome reception by the cultivators of the science. It will take a high place, far above the speculative dissertations of the age.

J. BARNARD DAVIS.

IL BRAHUI: Studio di Etnologia Linguistica. Di Felice Finzi. Firenze: 1870.

THIS, a reprint from the Bulletin of the Italian Geographical Society, is a learned essay by Mr. Finzi on that remarkable isolated language, the Brahui, of the grammar of which he gives a very close analysis. This language is isolated in Beloochistan among an Indo-European group in Leach's vocabularies. Lassen detected affinities to the Dravidian; and Dr. Latham, in "Man and his Migrations" (p. 225), made

* "Maasbestimmungen der Oberfläche des grossen Gehirns." Von Dr. H. Wagner. 1864. 4to.

† "Ueber die typischen Verschiedenheiten der Windungen der Hemisphären und über die Lehre vom Hirngewicht." Mit 6 Kupfertafeln. 1860. 4to.

these known. Caldwell, in his *Dravidian Grammar* (p. 25), proves that there is Tamil in the Brahui; but he says the great majority of the words in Brahui are not Tamil. M. Finzi adds little to our knowledge, and adopts the view that Brahui is partially Dravidian, but that it contains elements allied to the Naga (Tefgsa, Namsang, Mithan, Kari), Bodo, Garo, Munniporee, Sibsauror Niri, Kooch Behar, and Deori Chutia, of the north-east.

With regard to some of these supposed affinities, they disappear on wider examination. Thus, the Deoria Chutia, which is unclassified, is allied with another isolated member, the Tanguhti, and thereby with the Tibetan.

The discrepancies of opinion with regard to the exact relations of the Brahui to the Dravidian group arise from an erroneous view of the distribution of that group. This is partly attributable to a strange fancy for what are called Mongol affinities, and which have driven observers to seek them particularly in Ugro-Tartar, and of these Turkish. A wider investigation will bring into the Dravidian group two great members. The first is the eastern, including the Japanese, Loochoo, Korean, and some others more remote. The second, or western, member is the unclassified Basque language. Its elements are derived from the Dravidian, and, where divergent, from the Kolarian group, showing that the departure of the Iberians was from India. If Japanese and Basque are from the same stock, then there ought to be some coincidences and resemblances, and there are, which establish a mode of proof. The practical value of these facts philologically is, to furnish us with materials for comparative grammars respectively of Japanese and Basque, and better materials for the Dravidian. Ethnologically, we have an Indian departure for the Iberians and for their comparative philology, and for the Brahui the same, but with indications of a much later migration.

HYDE CLARKE.

ARCHIVIO PER L'ANTROPOLOGIA E LA ETNOLOGIA.

UNDER this title a new quarterly journal has been started at Florence, the anthropological part being edited by Dr. P. Mantegazza, and the ethnological part by Dr. F. Finzi. The first number opens with a general introductory article by Finzi, followed by a psychological paper by Dr. Herzen.

Professor Mantegazza contributes a memoir on the Cephalo-spinal Index in Man and in the Anthropoid Apes, and the method of its determination. By the term *cephalo-spinal index*, the author designates the ratio which the area of the occipital foramen magnum bears to the cranial capacity. To measure accurately the area of an irregularly-shaped aperture is, however, a task of some difficulty, and Mantegazza was at first content with determining only the circumference of the aperture. In measuring sixty-eight human crania, the greatest circumference of the occipital foramen observed was 119 millimètres (4·7 inches), and the least 83 millimètres (3·3 inches). By comparing the circumference of the foramen with the capacity of the cranium, the author obtains a ratio which he believes to be of value as a constant

specific character. Thus, in a young ourang the ratio was 22·37, and in the adult ourang, 20·97; while in an adult male gorilla it was 18·94; in *Hylobates gracilis*, 53·43; and in an Australian woman, 9·7. The average in man is between 6 and 7.

It is evident, however, that the circumference of the foramen is not proportional to the area, and hence the foregoing relations are founded on data not altogether satisfactory. Nor can the area be deduced from the circumference by a simple calculation, for the foramen is neither a true circle nor a true ellipse. Hence Mantegazza has devised the following mechanical mode of approximately measuring the area without calculation. He introduces into the cavity rectangular prisms of wood having transverse sections of known superficies. This done, he patiently fills up the irregular space between the sides of the prisms and the margin of the foramen by thin iron wires; and, when the aperture is completely filled, transfers these wires to a small instrument furnished with a scale by which the area of the transverse section of the bundle of wires is immediately measured. This quantity, added to the space occupied by the prisms, of course gives, within a small error, the area of the occipital foramen. This area stands to the cranial capacity in the ratio of ten to the cephalo-spinal index. Mantegazza has applied this mode of measurement to one hundred human crania of different races, ancient and modern, and to eight skulls of anthropomorphous apes. The mean area of the foramen in the human crania was 717·03 sq. mm. (1·111 sq. in.); the lowest observed being 530 sq. mm. (0·821 sq. in.), in the cranium of an ancient Peruvian woman; whilst the greatest area amounted to 1,000 sq. mm. (1·55 sq. in.), and was found in the cranium of an Italian assassin who had been executed. The mean area of the foramen in forty crania of females was 691·7 sq. mm. (1·072 sq. in.); whilst that of sixty crania of males reached 733·9 sq. mm. (1·137 sq. in.); hence the occipital foramen is, on an average, smaller in the female than in the male. The mean cephalo-spinal index of one hundred human crania was 19·19; the mean of the forty crania of females being 18·48, and that of sixty crania of males 19·65. The lowest index (13·49) was found in a female Florentine, whilst the highest (25·94) occurred in a male Feejeean.

Prof. Boccardo contributes to the same number of the "Archivio," a memoir on the causes determining the relative number of the two sexes in the statistics of birth; whilst Dr. E. H. Giglio publishes the first part of an elaborate communication on the Tasmanians. The latter paper is illustrated by some excellent lithographic portraits of three Tasmanians, which will immediately be recognised by those who are familiar with Mr. Bonwick's writings on this subject.

F. W. R.